NORMAN J. COLMAN, Editor and Publisher,
97 Chesnut street, St. Louis, Mo.

A. GUNTER, Publisher, 99 Third St.
Louisville, Ky.

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FARM NOTES FOR MAY.

Most of the spring crops have now been planted. Their proper cultivation is a subject of much importance. Very much of the success of a crop depends upon whether it has been properly or improperly attended to. Various opinions exist among farmers in regard to the proper cultivation, for instance, of Indian corn. Some contend that nothing but the plow should ever enter a corn-field, and that, at the last plowing, ridges should be thrown up to the corn to support the stalks. They also say it should have a certain number of plowings under all circumstances. Others say the cultivator only should be used, and that level culture is far preferable to hilling.

We will briefly give our views, on its cultivation. As soon as the corn begins to show itself well, we recommend to go over the field with a harrow, taking out the teeth in its centre—the team being astride the row. By this means the weeds are all destroyed and the surface of the ground left in a mellow condition. The corn will now rapidly shoot ahead. As soon as the weeds begin to make their appearance, throw with a one-horse plow the furrows from the row to the centre. This will again check the weeds. In a few days commence with the cultivator, which will throw back the furrows to their places, and with this implement keep the weeds down and the ground mellow. Especially run the cultivator between the rows after every rain, if possible. We think that after corn has attained much size that the plants suffer very materially from the mutilation of the roots if worked with the plow. That to break and destroy the roots is injurious, there can be no doubt. We believe level culture is preferable to hilling, as the ground more readily absorbs the rain that falls, and holds it in reserve for the future benefit of the plants. Neither is hilling necessary to support the stalk. Nature has wisely provided braces to be thrown out to support it; and if they are covered, new braces will be thrown out. For these, and other reasons we might mention, we prefer level culture.

Keep Down the Weeds—"A stitch in time saves nine"—now is the time to subdue the weeds. They are small and weak, and can be easily destroyed. One day spent in this way will accomplish more than half a dozen by-and-by: keep all the teams going—all the men at work in demolishing them. The frequent showers of this season will bring them forward by the million, and they will grow most luxuriantly. If you do not labor arduously, they will rob your crops of the richest food, and in the heat of summer of the moisture they so much need.

Repairing Fences—If your fences are out of repair, lose no time in repairing them. This can be done after heavy rains when the soil is too

wet to work. If your stock get a taste of the crops and find they can break over the fence to get into them, you will have a hard time to keep them out; therefore, repair your fences and gates at once.

[Written for the Valley Farmer.]

PHILOSOPHY FOR FARMERS.

BY DR. JOHN T. HODGEN, OF ST. LOUIS.

[Continued from April No.]

The atmosphere bends the sun's rays from their course, and gives us the golden twilight of evening, and the dim, yet brightening dawn, with that growing richness that paints in gorgeous tints the morning sky.

But for this agent of refraction, as the sun sinks behind the Western horizon, it would leave us in an instant in the midst of midnight darkness; and the morning's sun would burst full orbed upon us with all the intensity of its mid-day brightness, awaking with untold terror a slumbering world.

Without it we would have no love-inspiring twilight to soften and beautify the landscape; no dream-provoking dawn to paint afresh on memory's faded canvass the faces and forms, the woods and meadows, and all the pleasant associations of childhood, and give them a freshness, a purity, and brightness that even in the ardent coloring of youth's bright day dreams they never possessed.

It fans the fires of Ætna and Vesuvius, and alike the Will o'the Wisp; furnishes materials for the growth of all plants, from the pines, the cedars and palms—reigning monarchs of the forest—to the single vegetable cell that nestles amid the polar snows.

The carbonic acid exhaled by the thousand fires of animal life is consumed by the vegetable world; and the oxygen distilled by the cedars of Lebanon may be consumed by the lion and the tiger of Central Africa. And the atmosphere is the agent through which this commerce in gases is carried on.

The air moves continually. Not an insect stretches its tiny wing to flit for a moment above the spot that gave it birth without it—not a bird carols its morning song without giving motion—no breathing animal lives but by the aid of aerial currents. The low whisperings of love are committed to its care—yea the dying flower of one bright day sends forth its perfumed breath to the keeping of the passing breeze.

The enrapturing strains of Beethoven, of Handel, of Mozart, of Jenny Lind, found no other medium for their transmission.

That eloquence that awakens the intensest feelings of the human soul—now by its magic influence exciting to frenzy and again wringing tears from eyes that seldom weep—is still, is powerless, but through the atmospheric air.

The winds are regular in their circuits and controlled by causes that never vary.

The sun, shining perpendicularly upon that part of the Earth about the Equator, heats its air, which, thus lightened, ascends; and would leave a comparative vacuum, but for the rushing in of the wind from the North and the South to fill the space. And thus we have on either side of the Equator a current blowing toward that point; and near the surface and in a straight line, North or South.

The rotation of the earth on its axis from West to East, causes the winds blowing toward the Equator to fall behind or to the west of the point toward which it first started; so that we have in the North Torrid Zone a wind at the surface ever blowing from the N. E. and in the South Torrid Zone a wind blowing from the S. E.—remembering that the line of the sun's perpendicular rays varies—that in June he gets as far North as the tropic of Cancer, and in December as far South as the tropic of Capricorn; thus modifying the positive expression used in regard to the winds within the tropics.

Beyond the tropics of Cancer and Capricorn; or about 30°, or 1,800 miles on each side of the Equator, or 3,600 miles from each other; we have calm belts, or belts passing around the earth, where there are no regular winds but only fitful breezes. It is a matter of common observation, and especially during the summer season, that our winds in the North Temperate are from the South-West, or precisely opposite those in the South Temperate and the North Torrid. So that the winds from the North Torrid and the North Temperate, spring alike from the calm belt of Cancer; and those of the South Temperate and South Torrid spring from the calm belt of Capricorn. It is obvious that these surface winds springing from the same points, and blowing in opposite directions, must be supplied by currents from above.

Microscopic observation has proven that the red rains of Spain, France, Italy and Northern Africa are colored by the dust raised by the winds from the vast pampas of South America; which are first borne along by the South-East trade winds then passing upward at the Equator, as it is crossed and carried Northward by the upper current, flowing in the reverse direction of the North-East trades, thence decending at the calm belt of Cancer, and carried to Northern

Africa and Southern Europe or the country bounding the Mediteranean.

Since God has tallied the winds we have been able to make out their circuit, and Lieutenant Maury has, from a very extensive series of observations in every part of the world, demonstrated their course to be as follows:

Piling up in the North from the South-West currents, they ascend and flow Southward as an upper current, to the calms of Cancer; thence decend and pass on toward the Equator as the surface N. E. trade wind. By the heat at the Equator they are rarified, and caused to rise and pass forward as an upper current, to the calms of Capricorn; where they decend and pass on to the Southern Pole of the earth as North-West surface winds; but piling up here they flow back as upper currents to the calms of Capricorn; then pass down to the surface again and blow as South-East trade winds toward the Equator, where, rising again, they pass Northward as upper currents, until they meet the calms of Cancer, when again they decend, and blow as South-West surface winds; in the North Temperate region, again pile up at the North Pole. This is the course of the winds; and this unending round of aerial circulation is kept up for a purpose as wise in its conception as it is universally beneficial in its results.

But there are other currents that are due to peculiarities of the surface of the globe, such as monsoons, land and sea breezes; these last are caused by the varying capabilities for radiation and absorption as manifested by land and water.

The land heats most rapidly and radiates most freely; so that in the forenoon the air immediately above it is heated and ascends, and a cool wind sets in from the sea to fill the vacuum; and this continues until late in the afternoon when the sun has less power; when the water begins to radiate more rapidly and its superposed air is heated and rises—*then* the breeze sets from the land toward the sea.

These breezes vary greatly with the latitude, the season, the character of the land, etc.

Beside these, we have currents produced by every leaf of the forest, every blade on the plane, every winged creature, every beast and reptile that breathes the air.

The law of the diffusion of gases has an important bearing in the production of aerial currents. For all vegetables take from it carbon and return oxygen; thus changing its composition, as well as its specific gravity, either of which would be sufficient to generate currents.

When the broad leaves of a luxuriant vegetation are spread out for the contact of the air, they either exhale or absorb moisture, and this will depend on the relative moisture contained in the one or the other.

If the air be loaded with watery vapor, and the leaves have not their vessels filled with sap, they take up the moisture from the air. Again, if the air be dry and the plant is loaded with sap, then the leaves give it off and the air absorbs it. Thus, then, is ever a change taking place (?); and in either way a change in the specific gravity of a limited portion of air is induced and currents set to work to equalize the disturbance. Animals in the same way either absorb or give off by their skins and lungs watery vapor—take up oxygen and exhale carbonic acid, thus changing the composition of the air and necessarily, as already explained, inducing a circulation of the air. If this were not the case, the carbonic acid given off by the lungs of animals would remain in contact with their mouths, and with the next breath would be drawn in and poisoning would soon follow.

So also with plants; the exhaled oxygen would accumulate about them until all the carbonic acid was cut off, and they would necessarily die.

[To be continued.]

The Principles and Practice of Land Drainage.

Such is the title of an excellent work on this subject which we have just received from the Publishers, Robert Clarke & Co., of Cincinnati. The work is neatly printed and well illustrated. It is edited by John H. Klippart, the talented and laborious Secretary of the Ohio State Board of Agriculture and author of a popular treatise on the "Wheat Plant."

Within the last few years the subject of Drainage has been thoroughly studied, and its importance and advantages practically demonstrated by the Agriculturists of Europe, and particularly of Great Britain; while in this country it has receieved but little attention from farmers generally: so little, indeed, that when occasionally intelligent men undertake the thorough drainage of their farms, they usually get credit from their do-as-my-father-did neighbors, of burying their money with their tiles. The resulting improved appearance of their farms, and the increased quantity and superior quality of their crops, however, soon convince even the least observant of the profit of burying money in this way. No doubt much money may be

and has been expended fruitlessly in ill-applied drainage. The subject must be understood both in theory and application before any of the great practical results which have been attained, can be secured by every one who undertakes the drainage of his farm. The purpose of this work is to supply that information in a plain, practical way, easily understood by any intelligent farmer. It tells him the properties of his soil, and how it is affected by drainage; what kind of land needs drainage, when and why it will pay. Some of the advantages of underdraining are summed up and thoroughly explained under the following heads: 1. It removes stagnant waters from the surface. 2. It removes surplus waters from under the surface. 3. It lengthens the working season. 4. It deepens the soil. 5. It warms the under-soil. 6. It equalizes the temperature of the soil during the season of growth. 7. It carries down soluble substances to the roots of the plants. 8. It prevents "freezing out," "heaving out," or "winter killing." 9. It prevents injury from drouth. 10. It inproves the quantity and quality of crop; it increases the effect of manures. 11. It prevents rust in wheat, and rot in potatoes. These advantages are not suppositions, but are proved by the actual experience of intelligent men, which is given in detail.

In the second part of the book are given practical directions for the location, cutting and laying of the various kinds of drains, according to the position and quality of the land; modes of preventing and removing obstructions in drains; descriptions of the tools, the various improved plows, and other inventions used in the operations; and of the several kinds of tile, their respective advantages, and minute directions for their manufacture, including the selection and working of the materials, molding, drying and baking of the tile, etc.

The whole is illustrated with nearly a hundred engravings of sections of drains, tile, implements, etc.

The work is thorough and comprehensive, and supplies the farmer with all the information which he must possess before he can intelligently and profitably commence operations. It ought to be in the hands of every farmer in the country. Price $1.25. Address the Publishers.

ED. VALLEY FARMER:—I will give you a short receipt to prevent birds from pulling up corn. Pour hot water over the corn until it becomes warm enough to melt tar; pour the water off, mix a small quantity of tar, then add plaster of Paris or fine wood ashes until it ceases to stick. Experience will soon teach you what quantity of each is necessary. Neither birds nor insects will touch the grain. C. SMITH.

AUTOMATON WATER-FENCE.

An esteemed correspondent sends us the following letter from Meade County, Kentucky. It will be seen that the subject of his communication is interesting chiefly to those who cultivate farms on the banks of our large rivers; but it seems to us that the suggestions which he makes might be profitable also to others.

He writes of fences, running down a considerable way into the river, for the purpose of watering stock, so constructed as not to be easily washed away by the current nor yet by floods when they occur. It is obvious that in this application of them they should run so far below low-water mark as to secure the stock at all seasons of the year a plentiful supply of the element, and so that they could not get round the extremities of them without going beyond their depth. But to secure this latter result, perhaps, the better plan in some cases would be to connect the parallel fences by means of a few panels running from one to the other.

It seems to us that many a farmer owning land intersected with small creeks that are subject to being often considerally swollen with sudden rains, and which sometimes sweep away whole panels of fencing (that, constructed in the ordinary way, are never recovered), might adopt the plan laid before them with profit and advantage. And here we will take the liberty to remark that too much attention cannot be paid to the construction of fences in such situations.

MEADE COUNTY, KY. March 21st., 1861.

Dear Sir—When I parted from you on the Wharf at St. Louis, I promised that, as I was about to embark on a tour of visiting and observation among my brother farmers, I should from time to time furnish you, for the benefit of the readers of your valuable journal, with notes of everything calculated to excite their interest, in whatsoever I might see or hear in my rambles regarding the improvements or the shortcomings of those farmers with whom I might come in contact.

Well, I will commence, then, by stating that I am at present sojourning with my old friend George K. Aydelott, of the Magnolia Farm, in Meade county, Kentucky. It is a beautiful tract,

situated on the left bank of the Ohio, and containing about six hundred acres, of which there are some three hundred and fifty in cultivation. As he is a good-natured, jovial, good-humored man, and, in short, a man possessed of many excellent qualities both of head and heart, I shall take the liberty of criticising his method of farming closely, knowing that if I happen to censure him for his faults and shortcomings (of which he has not a few), he will submit to it patiently, for he is well aware that I am equally ready to give him full credit for the many features in his system which are really good.

The first object that arrested my attention, was an Automaton Water-fence, that is to say a lane-fence running down the slope from the front fence on the river bank, and leading some distance into the stream. The object is to enable all the stock on the premises to water themselves, a matter of no small importance on a farm of the dimensions of Mr. Aydelott's.

I believe this is the only gap for the watering of stock that I have ever observed on any cultivated farm either on the Mississippi or the Ohio, a circumstance which I suppose is due to the fact that the drifts and floods would sweep away any fence of ordinary construction. The entire efficiency of this has been fully tested, having been submerged quite a number of times, and yet it remains as strong and serviceable as when built; and its quality of resisting the floods of the Ohio I should think ought to be sufficient to commend it to every intelligent farmer.

The posts and panels should be made entirely of oak, but the riders and stakes may be of any kind of wood indifferently. The panels are constructed like an ordinary gate, consisting of three planks ten or twelve feet long, six or eight inches wide, and one to two inches thick, morticed into the end posts and firmly bolted to a ledge in the centre to keep them in their proper position and to give them strength and stability. The posts above referred to consist of short pieces of cedar or oak wood, four feet long and eight inches square, these serve as anchors to the panels; they enter the ground to the depth of three feet, leaving one foot above the surface. Near the lower end is bored a hole with a two-inch auger, into which is fitted an oak pin twenty inches in length, on either end of which is laid a large flat rock, thus effectually securing it against being displaced by the water. There is also a hole bored through the upper end of the post three-quarters of an inch wide to receive an iron pin which passes through and secures to the anchor the end posts of two adjoining panels. The panels are now floating on the water and ready to receive the riders and stakes, which is done exactly in the ordinary way by raising the panels upright and driving the stakes deep into the mud, and surmounting them with the riders.

Yours truly, "Q in the Corner."

[Written for the Valley Farmer.]

The Home for the Farmer.

It has frequently appeared to our mind that there is nothing that indicates more correctly the condition of a people morally, mentally, socially or industrially, than their habitations. On the homes of a people are written their history. The wigwam, the tent, the log house, the baronial mansion, the marble palace, the feudal castle—all indicate a specific class of circumstances and a certain *status*, so, that other things being equal, we can adopt it as an axiom that, give the condition of the homes of a people and we at once find the degree of their development. The ruins of the homes of races passed away, give us a certain index to their habits, circumstances and general development.

It is not our purpose to illustrate these propositions, which can be amply proved by the remnants of the past as well as the workings of the present, but to direct attention to some facts that force themselves upon the mind in attempting to account for that want of taste and comfort that is apparent in the most of the homesteads met with in the West, which is apt to communicate wrong impressions to the mind of the stranger and is calculated to exert a baneful influence on the minds of the inmates, and especially upon the younger members of the family. Several circumstances have contributed to the present miserable condition of our rural homes in the West. Prominently among these comes the vast scope for change afforded by the immensity of our wild lands, with their endless varieties of soil, climate and crop, and the temptations they held out for speculation. This gave rise to careless, almost reckless culture; to the desire for large fields and large farms; to improper cropping; in fact to ruinous negligence of the soil, for it was found easier to clear a new field than maintain an old one in good condition; and the *endless* quantities of unoccupied land in the distance, with the ease with which a domiciliary change could be effected, created a desire for change from the love of it, or the force of habit and example. This system of clearing and cropping till the land was exhausted, then selling out *an improved farm* (?) to

a new comer; moving to another place to recommence the same course of ruin to more land, and of total destruction to the conservative element in themselves and their families—it is to these features in our social character and condition that we wish to direct special attention. It is true that in this go-ahead method we trace much of the immense development of the resources of the country and the progress of the Western march of the star of empire; but can we not see that this course is in itself self-limiting, and that it is *safer* and will in the end be better to do things well rather than fast.

In this system of change we see several deteriorating influences at work. It encourages, if not creates, a desire to obtain a subsistance in any manner but by care and labor, and has given rise to speculation in every possible manner—in the soil, in banks, in politics and even in religion. Again, it causes and encourages a suicidal course of agriculture, the rule being to take all that can be taken from the land without returning anything to it, till it is worn out and is either forsaken for newer fields or is left to children in such a condition that they must leave it, because it has nothing in it for them to respect and fails to yield its wonted returns; and thus they too are driven from the home of their fathers to live out the lessons of ceaseless change. Again, this course of change precludes the desire for comfortable, beautiful, convenient homes; and we find merely a bare protection from the inclemency of the weather, and in numerous instances not even that, in which families are reared without any adequate ideas of home life, and as a consequence love every place more than home—see greater beauties and find more enjoyment away *from* than at home. To the sprightly, and inquiring mind of youth, home is cold, cheerless and uninviting, and *becomes* shunned and despised as it has been neglected. This creates another phase in the character. Our people as a whole *live out;* the number who live in hotels and private boarding houses is enormous; hundreds of our children are born from home, raised without a home, and are practically ignorant of home life and home influences. And how dreadful to the individual, and how dangerous to society is this want of home!

Upon woman how fatal is this influence.—Reared without true views of what home is; ignorant of its pleasures or its duties; accustomed to flit from place to place; living in change—how can she fulfill her maternal duties; how can she instill those feelings of love for home which alone beget true love for country? Such women cannot be counted as the true mothers of America, whose mission is to raise up and train patriots, philanthropists—the bone and sinew of our country—but rather as the butterflies of society, producing the grubs and caterpillars that prey upon the vitals and destroy the constitution of our country.

Could we not rather select our homes as a resting place for life? Could we not resolve, as far as human forethought could reach, to centre our thoughts, hopes and enjoyments in that home? Could we not labor to render it as *pleasant, comfortable,* aye, *beautiful* as possible?—make it something we could love and take a pleasure in—have it as the hope of our own declining years, and the pride of our rising sons and daughters? And can we not try to let those children see and feel that, each year, those acres yield more and more, and that old homestead year after year acquires new charms, till the children and the children's children shall centre their hopes, shall unite their loves upon that fine "old fashioned homestead, with its doors still open wide."

Nothing will give more real zest to life than this home love; nothing will create a more effectual barrier against the allurements and dissipations of society; nothing create a love for labor, a correct appreciation of the honor and value of industry; nothing prove a more certain safeguard against the temptations to speculation or political demagoguism, than this home influence; nothing give sanctity to the impulses of the human heart, or a foundation for the temple of the christian graces, as home. Woman to be anything of real value in the world must have home. It is her legitimate dominion. In her *mother's* chair she wields the destinies of the world. Tell us what kind of mother's we have, and we can at once determine the character of the people. The wife and mother merits a suitable home. Shut up to a very great extent in this *one spot,* in simple justice to her it ought to be made to combine all the elements to make it delightful to her, instead of making her feel like a bird in a cage, pining and fretting amid all that is unbeautiful, unlovely, uncomfortable, inconvenient and undesirable.

We see marks of improvement in this respect springing up all around in the graceful edifices; the ornamented lawns, the trim gardens; the taste for evergreens, flowers and fruits; in the culture of the graceful vine and the lovely rose on the lowly cottage wall. In those persons who are taking the initiative in this, we see

patriots and benefactors of our country. In this increasing love for information upon these subjects we see the outbeamings of hope in the future. And to those in whose ears the earth-worms, and gold-worms, and the grubs and caterpillars of human society, are still whispering the *broad acres*—the *long purse*—the *something good* that is to be saved for the children when they go into the world for themselves—we say give them the home love; the true appreciation of home life and its pure enjoyments. You give them more than can be found in the miser's hoard, or the idler's speculations—the present safety of our country, her future prospects of unity and peace are all concentred in *a pure, conservative love of Home.* W. M.

History of Agriculture and Gardening.

[Continued from April No.]

It may be supposed, that an art which was capable of ministering so greatly to their personal gratification as that of vegetable gardening, would not be neglected by the Romans. Columella has given a very considerable list of culinary plants which they possessed, and some of these must have been both excellent and plentiful since he speaks of them as being esteemed both by slaves and kings.

The more luxurious among the Romans were accustomed to force vegetables, and the Emperor Tiberius is said to have been so fond of cucumbers that he secured by that means a supply for his table throughout the year.

The kitchen gardens of the modern Italians contain nearly every vegetable that we possess; but their methods of cultivation are not such as to afford them in that degree of perfection in which we are accustomed to enjoy them and to which the climate would seem qualified to bring them. The gardens of the peasants throughout the Italian States are but scantily supplied—gourds and Indian corn comprising nearly all which they are made to contain. It is only in the gardens attached to religious houses that horticulture is pursued with any skill. In the labors of these the Friars themselves are accustomed to assist, while in other situations in that country the office of gardener is commonly filled by one who has had little or no instruction to fit him for the employment.

Gardens are found universally throughout the Netherlands, so that, to use the words of Sir W. Temple, "Gardening has been the common favorite of public and private men; a pleasure of the greatest and a care of the meanest, and indeed an employment and profession for which no man there is too high or too low." There is not a cottage to be seen which has not a garden attached to it; and although this is sometimes exceedingly small, the high degree of culture which is bestowed upon it renders the spot available for the comfort of the cottager's family. Towards this desirable object every particle of matter capable of ameliorating the soil is carefully collected and applied. From these circumstances it may be readily supposed that the Dutch are possessed of every fruit and esculent vegetable that their climate is capable of maturing.

In France, although gardens are not as universal as in Holland, they are still very generally met with; their characteristic quality being that of neatness. This statement refers, however, more correctly to the northern than to the southern division of the kingdom, where the cottagers' gardens resemble much those of the Italian peasants as well in their careless mode of culture as in the paucity of their contents. Nothing can be objected to the system pursued by the market gardeners who supply the French metropolis, and by whose skill and industry many vegetables are brought to a very luxuriant growth.

In the north of Europe gardening is in general a favorite pursuit, and the cottages of the peasants are for the most part provided with a spot of ground sufficient in extent to answer the demands of their inmates. This is not so much the case however in the Prussian dominions. Cabbages and potatoes form the greater part of the produce there obtained by the cottagers. The gardens of the higher classes are very differently managed so as to produce vegetables in great variety and abundance.

The art of gardening in Russia, in common with many other useful pursuits, owes its origin to Peter the Great. Previous to the reign of this monarch there was scarcely such a thing known throughout the Empire as a garden, and the only culinary vegetables grown in the country were a few species of stunted kale. Even now the use of gardens in that country is confined to the great and wealthy of the land, and their choice of culinary vegetables is but small. A considerable improvement in this respect is however visible of late years, during which time many additions have been made to their kitchen gardens by different travelers.

Horticulture has attained to a high degree of perfection in Russia under the auspices of its princes and nobles, and it is a curious fact that there are more pine apples grown in the im-

mediate vicinity of St. Petersburg than in all the other countries of Continental Europe.

It is to Spain that the rest of Europe is indebted for the introduction of many plants from Mexico, Chili and Peru. Seeds were brought from these regions in the reign of Ferdinand the Sixth for the royal garden of Madrid, whence their produce has been distributed. Spain is very rich in cultivated fruits, so that some species are made to form articles of external commerce; but the same pre-eminence in garden cultivation does not now appear which was probably as well deserved during the dominion of the Moors. The oldest and most extensive gardens now to be found in Spain are of Moorish origin, and have once been appendages to the palaces of their Arabian kings.

[Written for the Valley Farmer.]

LEFT HAND PLOWS.

To persons who have always been accustomed to using right hand plows, the first impression on taking hold of the other kind is that they are a very awkward concern. This fact prevented me for a long time from giving them a trial, but since using them I must say that in some respects they are decidedly preferable to the right hand patterns. So far as the work done is concerned I see no difference, provided the workmanship is equal in both cases; but the reason I like them is on account of the advantage given in the management of the team.

In all ordinary cases I consider it better to plow with a single line on the near side horse, than to use checks. With the left hand plow, the leader walks in the furrow, and however much the off one may wind about, it will not affect the run of the plow so much as the lead horse in a right hand plow can do. Old work horses often get so cunning as to find out that the closer they walk to the furrow the lighter the draught is. In such cases they are both difficult and tiresome to manage. Again, if your off-horse dislikes to walk in the furrow it makes very unpleasant working, and if you are obliged to use a bearing stick on him the leader must walk at a regular and even distance from the furrow or the case will not be bettered; whereas, in the other case, a horse that *knows the line* can be made to keep the furrow, and with a bearing stick on the off one (being on the land) he cannot come too close, and if hitched to the leader with a coupling strap it will not suit his taste to be all the time pulling from the other, as he will soon learn that the draught is harder. In plowing three horses abreast—a practice that ought to be in more general use—in a left hand plow with a bearing stick from the leader to the second horse, and from the second to the third one, I think the hitching arrangements very far superior to any other plan.

H.

PASTURING MEADOWS.

ED. VALLEY FARMER:—Some time last summer my attention was drawn to an article written for the *Valley Farmer* and published in one of the numbers last spring or summer on the subject of Pasturing Meadows, in regard to Timothy meadow not being able to stand equal pasturing to that of clover or blue-grass.

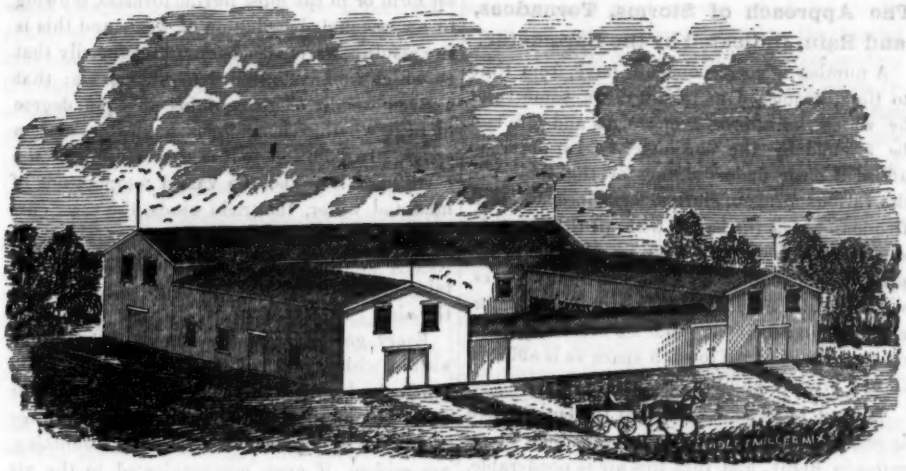
So far I readily agree with the writer of that article, but that Timothy meadows should not be pastured any in the fall season, being as he considers injurious to them—in this I can not agree. My experience is that pasturing meadows of any kind in the fall season of the year is a decided advantage to them, provided they are not pastured too much, and for the following reasons:

If a meadow is left to stand after harvest without pasturing in the months of August and September, if there be any fall rains, the wild grasses and weeds will spring up, and as they grow much taller than the fall growth of Timothy or blue-grass, they seem to choke out the fall growth of the young grass; and if the weeds and wild grasses are allowed to remain all winter and spring they will be materially in the way the following harvest. I have had ample experience to prove this in our rich bottom lands. My opinion is that meadows should be pastured down after harvest, say in the months of September and October, sufficiently to keep down the weeds and wild grasses and thereby give the fall growth of young grass a chance to grow and take root in the more thin or bare places of the meadow.

I have noticed, particularly in our bottom meadows, where a partition fence ran through the meadow, and where one side was pastured regularly every fall season, and on the other side, being a corn field or in some way not admitting pasture by stock, that while the side of the meadow regularly pastured every fall would keep a good set, the other side, not being pastured, would in a few years be taken with wild weeds and become worthless, unless broken up and newly set. I believe also that feeding hay to stock on the meadow in winter when the ground is frozen is also a benefit to it, by the seeds taking hold in the bare places and the land being enriched by the manure of the stock.

A SUBSCRIBER.

Mt. Gillam, Upper Alton, Ills.



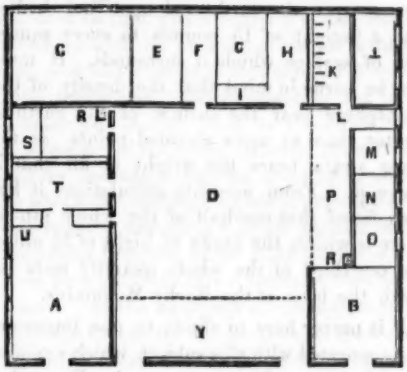
A PRAIRIE BARN.

We here present a plan for a barn on the prairie. Now is the time for those who have not got barns to begin to make preparations for building so as to secure the harvest from the inclemencies of the weather, and to afford stock comfortable quarters for the winter. There is nearly enough loss suffered on every good sized farm every year without a good barn to pay for building one. There is an immense amount of waste where hay and grain and straw are secured in stacks. Stock eat double the amount, and don't thrive on that, without shelter, that they do when kept in comfortable quarters. The building of a good barn should be one of the first steps of the farmer; and if he has not one, he should lose no time in erecting one.

The plan here presented is a good one to adopt where one has the means to erect one of this size.

This barn is designed for grain growing and stock raising, and the saving of manure which is not thrown out of every door and window about the barn, as is the usual practice. It is all wheeled into the yard every day, and littered over and trampled under foot. The stock are all fed under cover, in racks or mangers, and turned into the yard through the middle of the day. It is described as follows:

A, carriage-house, 26 by 36 feet. B, workshop and storage for farm implements or farming tools, 24 by 20 feet. C, yard for lambs and weaker portion of the flock, with hay-loft above, 30 by 30 feet, with an out-door yard for them to run out and in at pleasure. D, principal yard for cattle or sheep, with open sheds (P, Y,) on two sides. E, large bay, 20 by 30 feet. F, threshing floor, 14 by 30 feet, raised 7 feet from



the ground, with storage underneath for chaff, and fall for the straw as taken by the straw carrier to the stack at D. G, bay, 18 by 30 feet, with granary taken off the end at I, 6 feet wide. H, feeding floor for feeding cattle and for filling over the stables. K, cow stable; the cows stand on the ground, and the manger is up level with the floor, 18 inches from the ground. L, stable for young stock. L, door and passage-way for wheeling out manure from the stables. M, N, O, pens for hogs, pigs or calves, with plenty of storage above for corn and hay. P, open shed. R, R, cisterns. S, room for horse feed, off from one end of feeding room. T, horse stable. U, harness-room between carriage house and horse stable.

The plan of the barn, we think, is most excellent. It is neat, compact and commodious. The stock is sheltered by the sheds frim the cold blasts and storms of winter. Yards of this character are needed on the prairie, where the winds sweep on without impediment.

The Approach of Storms, Tornadoes, and Rain, Indicated by the Barometer.

A number of correspondents have, from time to time, requested us to lay down some rules by which the approach of storms and rain can be foretold by the barometer. In order to afford a clear understanding of the subject of the various forms of storms, tornadoes, &c., that frequently visit the earth, with all the phenomena of the atmospheric laws on which they depend, would require an essay of many pages, which would no doubt prove exceedingly interesting to our readers. But we must at present confine our remarks to such space as is afforded in our present number.

It must be remembered that the entire earth is surrounded with an atmosphere of 50 or 60 miles in hight, and that this air is ponderable, or possesses weight, and at the level of the sea presses upon the earth and upon our bodies with a weight of 15 pounds to every square inch of surface which it surrounds. It must also be borne in mind that the density of the atmosphere near the surface of the earth is greater than at more elevated points, as the lower strata bears the weight of all that is above it. From accurate calculations it has been found that one-half of the whole atmosphere is within the limits of hight of 3½ miles, and one-third of the whole quantity rests beneath the level of the Rocky Mountains.

It is proper here to allude to one important fact connected with this subject, which explains why air grows colder as we ascend. From what we have said above, it is clear that a pound of air occupies a greater and still greater space according to the distance from the earth, and each pound of air contains an equal amount of heat, whether in the smaller compass it occupies at the surface of the earth or in the vastly more extended space at a greater distance from it.

Among the wise provisions of the Great Architect of the Universe is the establishment of those laws which give motion to this great atmospheric ocean that surrounds the earth, notwithstanding the violence which sometimes attends whirlwinds and tornadoes that spread desolation and dismay in their train. But for the circulation of the atmosphere over the surface of the earth, in obedience to certain established laws, the earth could not be rendered a fit abode for men and animals, for stagnation and disease would everywhere prevail. The motion of the atmosphere, whether in its mildest form or in the most terrific tornado, is owing to an unequal distribution of heat, and this is the result of various causes, and primarily that to which we have alluded to above, viz: that a given weight of air contains an equal degree of heat whether it occupies a greater or less space. In addition to this the rotation of the earth upon its axis, the varied temperature of land and water, the trade winds, the great currents of the ocean, the varied surface of the land, from the extended plain to the loftiest mountain—all have an influence in giving motion to the air.

Every geographical division of the earth is visited with kinds of storms peculiar to its particular locality. For instance, the storms or other commotions of the atmosphere which occur on the western side of the Rocky Mountains, are seldom, if ever, communicated to the air on the eastern side. The air of this region is more or less charged with vapor, which is principally derived from the Gulf of Mexico. From causes which we have not the space to explain, it is found that there are general currents of air which move in opposite or different directions over the surfare of the earth at different elevations, and the phenomena of storms most common to us may be referred to the disturbance in the equilibrium in the upper and lower strata of air. These disturbances of the atmosphere, from whatever causes they may be produced, tend to move Eastward over the United States, because this is the resultant motion of the great mass of current passing over the surface of this region; that the storms of the interior tend to move nearly East, with a velocity of twenty or thirty miles an hour. These storms usually spread over a wide extent of country along the Atlantic border, and sometimes blow for many hours with great violence, and although they blow from an Easterly, or North-Easterly direction, it is remarkable that they commence in the South-West, and often pass the city of Charleston or Norfolk several hours before they reach Boston. Another fact worthy of notice in connection with the storms of this character, is, that, as soon as the violence of the storm is over at any given point in its progress, it is immediately followed by a strong North-Westerly wind—that is, the wind suddenly changes from an Easterly to a Westerly, or North-West direction, and is attended with an immediate depression of the temperature.

Other storms which are common to the interior vary exceedingly in extent. In some cases a storm of not more than a hundred miles in

width travels Eastward along the lakes; and again, at another time, a storm of similar width may commence at the South, and move along the shores of the Gulf of Mexico. Again, at other times the commotion appears to extend from some point at the North in the British possessions to the Gulf of Mexico and even further South, and move side foremost Eastwards.

There is another system of storms which have their origin in the Caribbean Sea, and follow the general direction of the Gulf stream, and sometimes sweep over the promontory of Florida, and overlap a portion along the Eastern coast of the United States. These are the great hurricanes, so remarkable and violent in their action.

In the summer season,, almost every part of the United States is occasionally visited with violent, though exceedingly circumscribed commotions of the atmosphere, known as tornadoes. These generally move in nearly the same direction towards the North-East, except, perhaps, on the borders of the Gulf of Mexico, leaving their narrow path, sometimes only a few rods wide, prostrating and destroying trees, buildings, and everything in their course. The same storms, when they occur on the sea, produce what are called waterspouts.

The phenomena of these violent circumscribed storms, which appear almost peculiar to America, have been investigated with much careful and laborious research by some of the most distinguished minds in America, including Mr. Redfield and Professor Espy. The former insisting that the motion of the air which moves with such immense force is in a circular or whirling direction, while the latter contends that the air is drawn in and upwards from every side to the centre. There are many facts presented to common observation that seem clear to us that the motion is of the spiral and upward tendency. The miniature whirlwinds we sometimes see passing over the country in the summer season, which carry high in the air leaves and other light substances, seem quite conclusively to favor this opinion, and these are produced by the same causes, only operating with a less degree of violence. It has also been contended that the great Eastern storms to which we have referred, that visit the Atlantic coast, also move in great circles, the centre of the circle being the point of the greatest violence, and that as soon as the centre of the storm has passed a given point the wind would of necessity come from the opposite direction from the North-West. Professor Henry, of the Smithsonian Institute, however, gives a different explanation of these great storms, which he thinks are of the same general nature as the thunder storms, and are the result of the two contending currents blowing from Eastern and Western directions, and which are attended with an entire subversion of the upper and lower strata of the atmospheric ocean, leaving the Western wind prevailing at the close of the storm.

For our purpose, in describing the changes of the atmosphere and its action upon the barometer, it is not a question of material importance whether the air during these storms moves in circles, of large or small circumference, or whether in straight lines—the effect upon the barometer is the same. As we have intimated, a change in the equilibrium of the atmosphere is the result of conflicting currents in the upper regions; if, for instance, a lower current of air sets in from a Southerly direction, the air being warmer than that with which it comes in contact, or with that which is above it, the temperature rises, and the pressure of the air is diminished, and this change is indicated by the fall of the barometer. In the cases of the more circumscribed storms, such as tornadoes, &c., the warm air of the lower stratum rushes suddenly to the upper regions, creating a vortex into which the surrounding air is drawn in with great velocity, assuming a spiral motion, while at the same time the whole body of the storm moves forward at the rate of thirty or forty miles an hour. At the approach of these storms the fall of the barometer will be more or less according to the distance of the storm from the place of observation. Rain almost always accompanies these sudden changes in the condition of the atmosphere.

The same rules for the observance of the barometer will not apply to all localities. Each district has its peculiar atmospherical conditions, according to locality in reference to seas, mountains, forests, &c. But by a careful observation of the movements of the barometer for a few months the observer will soon learn to foretell the weather with a considerable degree of confidence.

Previous to our ordinary Fall and Winter rains the barometer begins to fall from twelve to thirty hours previous to the commencement of foul weather. The fall of the barometer is usually from three-tenths to a half-inch, and sometimes more. Immediately upon its movement upwards it may be expected that the storm has passed over and that fair weather will soon follow. Previous to summer showers the barometer usually falls from one to three-tenths of an

inch, varying in time from one to four hours. The greater and more rapid the fall, the more violent will be the shower, accompanied more or less with wind.

It need not be expected that rain is to attend every fall of the barometer. There are frequent, slight undulations in the atmosphere unattended with rain. A storm may pass over a section of country, and a depression of the barometer will be observed for many miles from the centre of the storm; yet the change may not be sufficient to produce rain more than half the distance from the centre of the storm. The range of the barometer is considerably greater in some localities than in others; for instance, according to the records kept for the Smithsonian Institute, we learn that in some parts of Maine and New Hampshire the range, from the highest to the lowest, during the year is about 2¼ inches, while in some parts of the State of New York it is seldom half as great, and in Florida is but about eighty-hundredths of an inch.

In order to do full justice to the subject, a series of articles would be necessary, embracing meteorology, generally, with a full explanation of the dew point—that is, relating to the quantity of vapor contained in the atmosphere. But, with the explanations we have given, any careful observer may soon learn to foretell the weather with a considerable degree of accuracy.

As a weather indicator we regard the Aneroid Barometer better and more convenient than the Mercurial. The Aneroid is a French invention, but they are now manufactured in the United States, and are said to be superior to those of foreign manufacture, while at the same time they come at a less price. In the course of agricultural lectures delivered in Yale College in 1860, Professor Silliman, Jr., delivered a lecture on meteorology, and devoted an hour mainly to the description of the several kinds of barometers, and gave the preference to those manufactured by Mr. E. Kendall, at New Lebanon Springs, N. Y., and which he regarded the most important instrument that could be placed in the hands of the farmer.

[Written for the Valley Farmer.]

THE GOLDEN PHEASANT.

BY C. N. BEMENT.

The pheasants form one of the most interesting groups of the feathered race, whatever be the point of view in which we contemplate them. Their beauty of form and the splendor of their hues have attracted unusual admiration. Many dazzle by the metallic lustre of their plumage, which gleams with green, and blue, and gold. Such for example is the case with that gorgeous bird, the Golden Pheasant, of China, which delights us with the richness and multiplicity of its tints, contrasting admirably with each other.

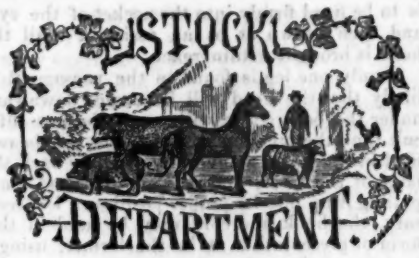
The common pheasant, now naturalized over the greater part of Europe, is a native of Asia, and originally brought from the river Phasis, by the Greeks in some of their earlier expeditions. It is an exceedingly beautiful bird, but it is far surpassed by many of its congeners, of which we may mention the elegant Chinese species—the Golden and Silver varieties. It is to be observed, however, that this beauty of plumage is confined to the males; the females are universally attired in a sombre dress of brown—often, indeed, exquisitely pencilled with spots and zigzag lines, but totally destitute of the brilliant hues which glisten in their mates.

Independently, however, of the beauty of the pheasant tribe, there is another point of interest which cannot be overlooked—we allude to their value as it respects the table. The flesh of all the gallinaceous birds afford to man a wholesome and nutritious food, and that of the pheasant is deservedly in high estimation.

Of the pheasant species, the Golden is the most beautiful. The male bird when in full plumage, which does not occur until the second year, measures nearly three feet in length, including the tail, which alone forms about two-thirds. The feathers of the fore-part of the head are very long, silky, and of a bright yellow; and considerably overhang those of the hinder part, which are of a brilliant orange, marked or bordered with transverse rays, forming a kind of cape. The last are elongated, and extend backward over the sides of the neck, which may be raised or depressed at will. A few minute hairs are scattered over the cheeks, which are of a livid complexion. The feathers of the neck are tinged with a mixture of green and gold, and bordered with black; those of the back are steel blue, and the upper tail coverts are bright yellow, the latter terminating in a crimson border. Breast and under parts, deep crimson. Wings, brown; scapulars, dark blue; legs, dark color. The long tail feathers are brown, with small transverse bars.

The specimen which our figure at the head of this article illustrates, was bred at Springside, and now running in our aviary, with other fowls. He has taken a great fancy to a little Black African hen, but his addresses do not seem to meet with much favor, probably from his ungallant behavior to his African favorite. Unlike most other birds, he is abusive and savage in his amours, at the time of nidification; at this time they tease and peck the head of the female bare to the skull, which often proves fatal as it did in our case—the hen died in consequence.

Although the Golden Pheasant can be tamed, and will associate and feed with the poultry. Yet an innate timidity prevents its thorough domestication. It is restless, and in constant motion, seeming to seek some hiding place out of the sight of visitors. Even the young pheasants will scamper off in terror if any unexpected intruder makes his appearance among them, although the remainder of the poultry remain unconcerned. *Springside*, 1861.



[Written for the Valley Farmer.]

On Parturition in the Mare and Cow.

BY HENRY CORBY, VETERINARY SURGEON, ST. LOUIS.

To those of your readers who are engaged in the rearing of horses or cattle, and by reason of distance cannot easily, if at all, obtain the services of a veterinary surgeon, some advice on the proper management of cases of difficult parturition may be acceptable; especially at this spring season.

As it is for such persons that this article is intended, it will be as plain and brief as possible.

In the first place the natural position in which either a foal or calf is born, ought to be well understood.

On making an examination with the hand, the fore feet are the first objects reached, behind them and above the legs, the nose and muzzle of the forthcoming animal will be found, the head being in advance of the knees, which fit in just behind the jaw.

Sometimes, though not often, the hind feet come first, and birth can be effected in this way, nearly as easily as when the fore feet and head present.

If then no head is found, when the examination is made, the examiner should satisfy himself whether they are the fore or hind feet that he touches; and the difference between the knee and hock joints will afford satisfactory evidence on this point.

If the foal or calf is found in either of these positions, no hasty attempt at aiding nature should be made; leave the case for half an hour or an hour, simply watching the patient.

It is to be observed, however, that aid is sooner needed by a mare than by a cow; in the mare the throes are more violent, and the strength in consequence sooner exhausted.

If no progress has been made before the second examination, then a further exploration is necessary: ascertain first whether the parts presenting belong to one, or two animals; for it is possible when there are twins, that the fore leg and head of one may enter the outlet from the womb at the same time with one leg of the other.

When this is the case, the single limb must be pushed back into the womb, having first a cord fastened around it, so that it may be easily drawn up when wanted; the missing limb of the other fœtus is then to be searched for and brought into its natural position, after which delivery will be easy.

If the parts presenting belong only to one fœtus, and are in their natural position, then gentle force may be used to endeavor to bring it away: and if the fœtus be very large in comparison with the size of the outlet, it may be necessary to use no small strength before delivery is effected.

There are three diseased conditions of the fœtus which may render delivery in the usual manner almost impossible, though the presentation is natural; they are accumulation of water in the head (technically hydrocephalus), and dropsy of the chest or belly (hydrothorax or ascites).

In the first case, the nose just protrudes from the womb, and on carrying the hand beyond it, the excessively large size of the head may be felt.

In the second, the head and neck protrude, but the chest by reason of its large size cannot enter the outlet; and in the third it is the distended belly which prevents the further passage of the fœtus.

In either of these cases, the swollen parts must be cut open, so as to allow the fluid to escape (and, as in the case of the accumulation of water in the head the bones are softened)—this may be done with a small strong knife; but care must be taken not to wound the mother in the operation.

Other circumstances may occasionally retard or prevent delivery, although the fœtus is in its natural position; thus it is possible that instead of a normal fœtus there may be a monster, having two bodies with only one head and neck; but such cases are rare, and when they do occur, it is likely that the monstrosity will be small, and so easily born.

If it should be too large to pass through the outlet, it must be cut to pieces, and so removed; and in performing this operation it is important to remember that the skin is the strongest part of the fœtus; let that once be thoroughly severed, and the fore legs may be easily pulled from the trunk, so that an incision carried around the leg above the knee, and thence over the shoulder to the back, will allow the leg to be removed with tolerable facility.

But in all cases in which the use of cutting instruments becomes necessary, it is better to allow the case to wait for some hours, in order if possible to obtain the assistance of some person expert in their use, rather than by reckless cutting to endanger the life of the patient.

We have now to consider the various unnatural positions in which the fœtus may be found, and how they are to be rectified.

The least deviation from the natural position, though not the most frequent, consists in a coming forward of the head and one fore leg only, the other fore leg remaining doubled up by the side or under the body. If the fœtus is small, birth may take place in this position; but usually an excessive amount of force would be required for its withdrawal; it is therefore better at once to search for the missing leg, than to run the risk of doing injury by pulling at the head and the one leg that is within reach.

By gently pushing back the fœtus, the leg

may usually be reached and brought into its place, though sometimes it is necessary to push back the foremost leg again into the womb, in order to afford room for the manipulations of the operator. When this is done a cord should be previously tied around the lower part of the leg that is to be pushed back, so that it may be easily brought up when its fellow has been found.

Another unnatural position is that in which both fore legs are left in the womb, the head alone presenting; this will be more troublesome, for birth in such a position is all but impossible; therefore do not attempt to extricate the fœtus by pulling at the head, until the legs have been reached and brought into their place.

To do this, first pass a cord around the lower jaw, then push back the whole of the fœtus as much as possible, using steady pressure, especially in the intervals between the labor pains; when this has been done, search for and bring up the legs, and then all will be easy, though it will probably have cost an hour or more of hard work before the legs are thus brought into their true position.

If the head is completely protruding while the shoulders are firmly jammed at the inlet of the pelvis, it is not likely that any effort at pushing back the head will be successful; the destruction of the fœtus has become necessary in order to save the life of the mother, and the head will have to be cut off.

In doing this, strip the head as much as possible so that the skin covering it may be left to tie to and draw at in the final extrication of the fœtus; amputate as low down the neck as you can, and then having tied a cord firmly around the skin, push back the body and proceed to search for and draw up the legs.

When the necessity for the amputation of the head is once apparent, the sooner it is done the better; as a short delay, or injudicious attempt to pull away the fœtus, may render extrication impossible.

The third and perhaps the most frequent of all unnatural positions is that in which the fore legs come into the passage without the head; this is frequent when the fœtus is dead, and is also difficult to overcome.

When both legs are in the passage the head is usually turned back by the side, and in such a case cords should be placed around the legs, they should be pushed back out of the way, and then press firmly against the chest of the fœtus, pushing it back as far as possible, then by passing the hand further backwards you will probably be able either to reach the head of the fœtus at once, or, by grasping the neck, to draw it towards you; if you reach the jaw a cord may be placed thereon and gently drawn at by an assistant while you guide the head round; or you may be able, grasping the jaw, to bring it round without assistance. Having brought the head into its place, the legs must be again brought forward, and the birth will soon be over.

When it is impossible to reach the jaw so as to turn the head, it may be brought round by using a small hook attached to a cord; the hook is to be fixed firmly into the socket of the eye, and then drawn at by an assistant until the head is brought within reach.

If only one leg is found in the passage it is likely that the head will be turned downward under the body; this will usually be less difficult than the previous position; but is to be rectified in the same manner, by pushing back the body of the fœtus, and grasping the head, then pulling it up into its proper position. If necessary, the hook and cord may be used in this form of presentation as in the former, using a more upward traction thereon.

The position from which it will be most difficult to extricate the fœtus, is that in which its rump presents against the mouth of the womb, the hind legs lying forward under the belly.

As it is not possible so to turn a calf or foal as to change a breech presentation into one by the head and fore feet, the only thing that can be done is to reach and bring up the hind legs and feet.

In doing so press steadily against the rump of the fœtus, raising it as much as possible at the same time, this will help to bring the hind legs more into reach, and the operator will possibly be able to reach the hocks and slip cords around them, at which an assistant should pull steadily, while the operator pushes back the body of the fœtus; the legs may then be got hold of and brought one by one into the passage and thus withdrawn.

It will probably assist the operator if the mare or cow be turned on to her back and kept there while he is endeavoring to reach the hind legs.

It is to be remembered that both legs must be brought up before any attempt is made to draw away the fœtus, any attempt to pull it away by one leg would only result in rendering its final extrication more difficult.

When it is impossible to reach the hocks, a cord attached to a stick may be thrust between the thighs and brought around the stifle, and the legs drawn up in that manner; and, if all other means fail, amputation of the legs at the hip joint must be resorted to, and the fœtus then brought away by fixing hooks into its rump, and drawing on cords attached thereto.

There is one other false position of the fœtus which needs to be mentioned, in which it lies with its back downwards in the womb; its feet pointing towards the spine of the mother.

In this case the fœtus can be turned into its right position, by first securing the head and legs with cords, and then by pressure on the withers gradually bringing it into its place.

There are many other points in connection with parturition, and the general management of animals both before and after that event, which deserve to be spoken of; but this article is already almost too long, and they must be left for a future occasion.

SALT FOR STOCK.—The best plan is to have the salt in troughs, under shelter, where the stock can have access to it at all times. They will not, then, take too much at a time. Where this is not done, salt should be given to stock once or twice a week regularly.

CATCHING HORSES.

Ed. Valley Farmer.—There are few things more aggravating than to be in a hurry to go to some place, and have a great trouble to catch a horse. I have sometimes made the assertion that a horse which I raise will never be hard to catch unless some one else spoils him. The way I manage is to keep them gentle from colts, handling them as often as convenient. When young horses are running to grass give them salt occasionally, and let them fondle about you, making as little show of *trying* to get hold of them as possible. There is nothing surer to spoil a horse forever than to run as if trying to hem him in, and yelling at him authoritatively, or scolding—when he can see, just as well as you know, that he is out of your reach. To put on the cap sheaf, whip him severely for causing trouble, and my word for it the next time you want to catch him he "will not listen to the voice of your charming, charming never so wisely."

Horses learn a great deal by signs. In beginning to teach them to be caught, go towards them on the near side, slowly and cautiously, making no demonstrations at all. If the animal begins to walk off, stop, and whistle, or otherwise manifest indifference until he becomes quiet again, then approach as before. When you are so close as to be confident that he will not escape you, speak kindly and hold up one hand ready to touch him on the withers, and thence pass it along the neck until you can get hold of his head, but do not seize him with a grab, as this tends to excite fear afterwards. By practicing this course, using the sign, viz: holding up the hand when you are a little farther away, each time, a horse may be taught to stop and be caught, even when in a considerable glee (playing), simply by holding up the hand and using some familiar phrase, such as *ho boy*, &c.

By way of caution, however, watch his actions and *intentions* closely during his tutoring, and if at any time or from any cause you see that he is going to run, do not by any means say anything or hold up your hand, as the sign given and disobeyed a few times will almost inevitably prevent your making anything out of it in future.

An English Dog Show.

(Birmingham, Eng.)

Under the presidency of Lord Curzon and the management of an influential committee, prizes of large amount are competed for by some 300 dogs, in the Horse Repository of Messrs. Bretherton and Harrison. No such complete classification has ever been attempted before. Viewing the strange diversities in form, capability, and disposition of the dogs in this whining, growling, and barking menagerie, we can scarcely admit the doctrine that the animals are merely varieties of one species, and that all have been developed by differences of food, circumstances, and training, from a single original pair; or, as some say, are collectively a tamed derivation from the lean and savage wolf. In this gathering of all descriptions of hounds, for instance, what extraordinary differences are observable in the nature and uses of the several breeds. Whatever of swiftness in pursuit of nimble game, of miraculous keenness of scent for a hidden or flying enemy, of untiring patience of search, of lithe agility or enduring speed may be required for hunting over the open field, across the deep flood, in the burrowed intrenchment or the recesses of the rock—in short, whatever excellencies and peculiar instincts are valuable in the mighty hounds that chase the antlered deer; in the keen, swift and sturdy hound that seeks the wily fox; in the slender, facile greyhound, all elegance and ease in rapid flight and leap; in the shaggy, half-amphibious otter hound; in the terrible blood-hound, with his pendant lip; in the clever pointer and the careful retriever—all are illustrated by perfect and unusually fine examples among numbers of the highest superiority of breed.

The blood-hounds form a very grand class, to which the Earl of Bagot contributes the most magnificent specimens, remarkable for their character of head and expression. The foxhounds would have been a larger class at any other season of the year. Viscount Curzon and Earl Grosvenor are the prize winners. Harriers and beagles are but few. The large rough-coated deer-hounds make a fine show, each a seeming original of a Landseer picture. There are some specially fine greyhounds.

The large pointers are the principal class, most of them of great merits; and the small pointers, especially the bitch class, still more extraordinary—the Hon. H. W. Powys, Mr. J. S. Soresby, Mr. H. Gilbert, the Earl of Derby, and the Earl of Lichfield carrying off prizes. The English setters are highly thought of. The Irish setters are not so grand as a class, though the prize dogs are very fine. Some setters and spaniels shown by Mr. Burdett, are considered unequalled. The retrievers are exceedingly good, Mr. Brailsford and Lord A. Paget winning the prizes.

There is a good class of Clumber spaniels, used for cover shooting. Mr. Boales and Earl Spencer exhibit the most meritorious. The two German boar-hounds were much admired for their strength and handsome appearance.

Turning to the other division of the show, we have the majesty of the massively framed mastiff, ferocious as a tiger to strangers, sagacious "as a Christian" in detecting thievery and chicane, gentle as a lamb to the hand that feeds and loves him; and we have the weedy, slim Italian greyhound, in form suffering from internal and external stricture, yet all grace and tenderness; shivering at the end of a riband or a watch-chain, and incapable of stronger field exercise than the hunting of a guinea pig. There is the nobility of the powerful Newfoundland, with his colossal paw—humane savior of wrecked mariners from the swallowing wave; and there is the antic-loving toy terrier, ridiculous for its littleness, delighting to be caressed upon his lady's knee. There is the thick, iron-jawed bull-dog, with his stealthy spring and unrelenting gripe, fierce, unflinching to the death; and there is the tiny spaniel, which loves to be nursed and dandled, or peeps timidly out of the shelter

of his mistress's muff. There is the active black and tan terrier, sworn enemy of all four-footed vermin; and there is the lazy, curly King Charles, in an ungainly state of plethora of good living, able to waddle after a comely dame, or repose upon her handsome hearth-rug. There is the homespun, plain, intelligent sheep-dog; and there are the grotesque, negro-featured pug, and the Skye terrier, lithe like a ferret, and shaggy beyond recognition of head or tail.

The mastiffs are a superb class; the black Newfoundlands equally good; the bull-dogs repulsive, yet interesting from the very extravagance of sullen savageness and latent brutality in their expression, and for their well-known pluck and prize-ring qualities. Sheep dogs are fairly represented; the terriers attractive and maintaining the credit of their order. One "rough customer" of a Scotch terrier is indeed a marvel; he is said to weigh less than three pounds, yet he is over two years old, and a day or two ago killed a fierce big rat, and his selling price is fifty guineas. One inimitably ugly pug, that as a lap-dog would by contrast give charms to a gorgon, is priced at a thousand guineas. The Italian greyhounds and diminutive toy terriers, of course attract most attention from the fair visitors. The Alpine mastiffs, St. Bernard dogs, an awfully rough Russian terrier, the rare Maltese lion dogs, and the Esquimaux fog dogs, are also a source of great interest.—[*London Times.*

YOUNG PRINCESS. A YOUNGER SISTER OF YOUNG PRINCESS.

OWNED BY CAPT. A. PHILLIPS.

Captain Phillips thus speaks of these hogs: The first figure is a life portrait of Young Princess; her sire was the son of old Moses Wheeler, imported in 1853 by Mr. Stickney of Boston, Mass. from England, and said to be the finest specimen of a hog ever on exhibition. He has taken more premiums at the Eastern Fairs than any one hog; his weight is 592 pounds gross. Princess' dam was a sow brought here by Mr. Clay of Kentucky, and took the premium at our third annual Fair as Woburn. Young Princess took the premium at our last Fair, in 1860, as Suffolk and Woburn, and weighed 465 pounds gross at thirteen months old. Two of her pigs at three months and thirteen days old, took the premiums, three hundred dollars each, and I think them to be the finest pigs of their age ever raised in Missouri. I sold four of them for $100; I refused $75 for the sow. They were bred by myself in St. Louis County. The old sow has now thirteen pigs by her side.

HORTICULTURAL.

A CHAPTER ON PRUNING.

There are many persons who do not seem to have any distinct idea of the object of pruning a tree. They seem to suppose that trees should be pruned every year, and at some leisure time in the spring set in with ax and saw and cut indiscriminately a branch here and another there, and we have not unfrequently seen an entire tier of the lower branches removed from every tree in the orchard, after the trees had attained to full one-third or one-half their natural size, thus doing a degree of violence to the trees by entirely destroying the balance between the roots and the branches, that time can hardly ever repair.

There is another class of cultivators who err as greatly on the other side, and seldom prune at all; some believing that nature requires no aid in this respect, and others neglect it because they do not know how and when pruning should be done. Very little pruning is required for most kinds of standard fruit trees, except the removal of a few buds and branches when the trees are young. But with trees cultivated as dwarfs the case is somewhat different. In that case the different character of the two plants brought into union by budding or grafting is to be considered, and in order to keep the body and branches of the tree within proper limits and to establish and maintain the most desirable form to the top, and to insure the best and most perfect fruit, as well as to regulate the quantity according to the capacity of the tree to mature, some care and skill are required in pruning.

The object of the following engravings is to illustrate and explain the management of trees of this kind, particularly the dwarf pear.

The proper age for setting the dwarf pear in the orchard or garden is when it has made two seasons' growth from the bud. The first year's growth seldom produces more than a single stem like Fig. 1. It is presumed that the nurseryman will cut it back to about one foot in hight, in order to cause the tree to branch low. (See Fig. 1.) All the buds from the ground up to the hight of six inches should be rubbed off, and such others left above as will be required to form a handsome, well balanced head. At this stage of the growth of the tree the most vigorous currents of sap will be to the central branches, and here the process of training should begin by cutting or pinching off the main stem and leading branches, as often as it is necessary to check the undue growth, to give additional strength to the lower branches, and secure a somewhat pyramidal form to the tree. By neglecting it at this stage of the growth, and even on to a second and third year after, we have seen many thrifty trees nearly ruined. For if these overgrown side branches are neglected for a year or two, they will run up long and slender, leaving the branches below them weak, and the tree all out of due proportion; and when these branches have been neglected through a second year's growth it will be difficult for any subsequent pruning to repair the evil and establish a well balanced tree. But if the summer pinching is attended to, keeping all the strongest growing branches checked, the weaker ones will acquire strength, and a well balanced symmetrical head will be formed, leaving but little to be done at the time of spring pruning.

Fig. 1.

Fig. 2.

Fig. 2, represents the tree after the first and second years' growth, from the time of transplanting. The spring pruning consists in again

cutting off the leader, and shortening the side branches as indicated by the cross marks in the cut. If any branch takes too much of an upward tendency, to give the desired form, the evil is easily remedied by pinching the end of the shoot just beyond a bud upon the upper side; or if the growth is too upright, shorten the branch, leaving a prominent bud for the continuation of the shoot on the under side. A little attention, subsequently, will be required to check the growth of any of the shoots that may have a tendency to supersede the one that requires encouraging. By the same means side branches from any of the prominent limbs may be made to shoot so as to repair any defects or lean places that may occur in the growth.

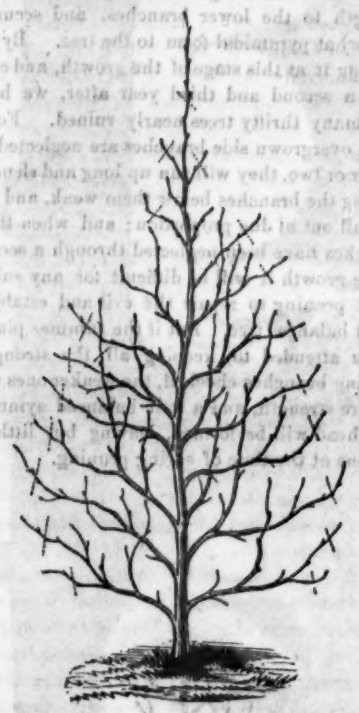


Fig. 3.

Fig. 3, represents a tree in its third and fourth years, and the cross marks will indicate the pruning required, and the proper form the tree should maintain.

The tree may now be permitted to bear a dozen or two specimens of fruit, more or less, according to the strength and vigor indicated by the growth. Without a well trenched and well manured soil the tendency of dwarf trees is to produce a superabundance of fruit spurs and to over-bear, at the expense of the wood-producing force. When the natural equilibrium between the wood and fruit-producing forces is thus destroyed, the fruit, from excessive bearing, becomes of inferior quality, and the tree gradually declines and finally dies. All this, on a well prepared soil, may be remedied by proper care and training. When a superabundance of fruit spurs appear they should be removed, and the tree allowed to bear no more fruit than it can ripen well, and at the same time make a healthy growth of branches. One of the most fatal and common errors in the cultivation of this kind of fruit arises from the reluctance on the part of the proprietor to thin the fruit to the standard of the capacity of the tree to perfect. If an undue quantity of fruit is allowed to hang on the tree, it will be of small and inferior quality, and frequently almost worthless, at the same time nearly destroying the tree; whereas, if the number had been reduced one-half, the remainder would prove of large and of superior quality, insuring the future growth of the tree, and an annual increasing product of excellent fruit.

In the subsequent treatment of the tree, besides *thinning the fruit with an unsparing hand, according to the vigor of the tree* (because the tendency of nature in every department is towards *over productiveness*), care should be taken to thin out any excess of branches that tend to crowd each other and prevent the healthy development of LEAVES, which are the organs of life and the sources whence the richness and the perfection of the fruit is derived.

PRUNING OTHER KINDS OF FRUIT TREES.

Other fruit trees require more or less pruning according to the natural habit of the particular kind. The cherry, for instance, can be but little improved by pruning. In many portions of the West the cherry tree is not altogether at home. Owing to their luxuriant growth, and the sudden alternations from heat to cold, the body on the South-Easterly side frequently becomes diseased. As a remedy for this evil the tree at one year old in the nursery should be cut back to one foot in hight in order to cause it to branch out as near the ground as possible. Any leading branches that have a tendency in their overgrowth to rob any of the lower branches should be checked in their growth by pinching off the leading buds. This, and the removal of any interfering branches, while the tree is young, is generally all the pruning this kind of tree requires.

Similar treatment is required for standard pears, with, perhaps, a little more care in remov-

ing interfering branches so as to secure a free open head.

In regard to apples we also advocate such a course of treatment, and particularly for the prairie districts, as will secure a low head:—First, in order to avoid as much as possible the effect of heavy prevailing winds; and, second, to protect from the scalding effects of the sun upon the stem, which cause the destruction of many trees. From low-headed trees the fruit can be more easily gathered without bruising, and with less labor. With low-headed trees, too, grass and weeds are less liable to grow, and the ground will remain more mellow and moist. The same rule of early pruning if applied to establish a free, open head, will leave little to be done in the way of pruning after the tree comes into bearing.

Peach trees, of late, have become so short-lived among us that there seems but little encouragement to plant and train them, except in certain favored localities. The natural habit of the peach tree, while young, is to form a thick thrifty head, but as it advances in age the inner branches die out leaving all the young wood upon the ends of the outer branches, and the fruit becomes inferior. To remedy this, and to keep the head of the tree more within reach, the method recommended by Mr. Downing, of shortening-in every year one-third of the length of the shoots of last year's growth, has been resorted to. But in large orchards this is a laborious work. The same benefits may, in some degree, be secured with much less labor, by thinning out every few years a portion of the outer branches at their junction with the larger ones. With care in this way a good round head may be preserved of young, vigorous, productive wood.

Selecting Trees to Plant.

Wm. Saunders, Editor of the *Horticultural* Department of the *Farmer and Gardener*, and most excellent authority, says:

"Recently, at a meeting of fruit growers, a member remarked that when he went to a nursery to select trees he took those that others had rejected, preferring low branched plants, and those that had made but a moderate growth, to tall, bare stemmed and luxuriant trees, as indicated by a profusion of strong, young shoots. In doing so he was only acting in accordance with the dictates of experience; and sooner or later all who plant trees will arrive at the same conclusion. Especially might attention be directed to the propriety of selecting trees of moderate growth; such trees will, if healthy, be found to possess a greater proportion of fibrous roots and consequently suffer less from removal. We know an experienced planter who always prefers yellowish and sickly looking evergreens when selecting a stock. A tree of that kind is almost certain to improve by being removed, and commence a favorable growth at once. The growth of the branches afford a tolerable fair index to the manner of root growth. A short, stubby growth indicates fibrous roots in abundance; long, rampant shoots are the growth of long, wiry roots."

[Written for the Valley Farmer.]

The Rose—Cultivation and Management.

BY CAREW SANDERS.

Roses are divided by some writers into two classes—Summer and Autumnal. The first blooms only once in the spring and early summer; but continues long in bloom, and includes some of the most beautiful kinds in size, form, and color, that are grown. The latter include all that bloom not only in spring and summer, but again in autumn; and are usually known as *Perpetuals*.

Although the class of Summer Roses does include some of the handsomest, yet on account of their blooming only once, they are not as desirable for the flower garden proper, as the *Bourbon, Tea, Perpetual,* &c. are. Still some of them should not be omitted from the shrubberry, for while they are everywhere acknowledged "Queen of Flowers," they also make one of the handsomest of shrubs. While some of the annual bloomers, as the *Moss, Prairie, Austrian Briars,* &c. must not be omitted from the garden however small.

We shall speak more especially at present of the different classes of Perpetuals; these require an abundant supply of food; well repaying a liberal and frequent application of manure, even in the richest natural soils. It is folly to expect them to display their beauties when planted in a poor, dry grass-plat, or yard, or lawn, with the grass growing close up to their stems, and without at least an annual manuring.

Before planting, the bed (for they are best planted in beds or borders by themselves) should receive a good dressing of well-rotted manure, and be dug deeply; if trenched two or three spades deep the better. We have found a compost, composed of leaf-mold and turf piled up where all the offal of the house can be added to it, and especially the waste liquids including soapsuds—to be excellent for roses. It should

be turned over once or twice so that every portion may be thoroughly saturated; and should be under a roof to protect from leaching rains. Two or three inches of this, or of other good manure may be laid on in December, after a light digging with a fork, and may then be left undisturbed till the following spring. Even in good rose soils this top dressing is necessary; giving much increased vigor and lengthening the flowering season, so as amply to repay the labor bestowed. An occasional soaking with guano water, say a pint to a barrel of water, has an astonishing effect both on the growth and bloom.

When the soil is thus made rich, they will require pruning twice a year; in March when the beds are dressed, and again in summer. Early in spring, say beginning of March, cut off every shoot from 6 to 9 inches from the old wood; if crowded remove some of them entirely. This done, there will be, when they commence to grow, a vast number of strong shoots, each crowned with a cluster of buds; leave only half of these to bloom, shortening the remainder to about one-half their length; these will soon break again, and in July, August and September will again be covered with flowers.

If the above was more practiced, we should hear less complaint about *Hybrid Perpetuals* blooming so sparingly; it is because they are starved, and can neither grow nor bloom. Feed them highly, and remove all seed vessels, and shorten occasional shoots, and make them grow, and they are bound to bloom.

Hybrid Perpetuals.—This splendid class embraces varieties having flowers of the richest colors, of the largest size, and finest forms, and of the most delightful fragrance; and with the kind of culture recommended above, a bed of them will give a constant succession of flowers from May to November — almost every shower brings out a fresh crop of blossoms.

The *Bourbons*, though not so highly fragrant, are a superb class, and almost perfect; the beauty and richness of the foliage adding not a little to the charm. They have the advantage, too, of enduring the greatest heat of the sun without injury to the blossoms, and open freely in our clear, warm climate.

The *China* and *Tea Scented* roses, are a most beautiful class, and, although somewhat tender, they can be kept out in our latitude during winter by bending down and covering well with leaves or straw, and if the points of shoots do get killed, they may be cut back to the sound wood, and they will grow and bloom well. They are almost constantly in flower, requiring but little trouble to keep them so. In summer a constant removal of their faded flowers is necessary, and this is all the pruning they require.

The *Noisettes*, bloom in large clusters of generally small flowers; some are strong growers, and adapted for pillars and trellises; others are quite weak and dwarf in their habits—they are all *free* bloomers, and extremely showy.

All the pillar or climbing roses, are entirely different in their habits from the above, and as they bloom mostly on last year's wood, they must not be pruned so severely; the shoots may be left nearly their full length, and tied up neatly to their pillar or trellis, and the older and superfluous shoots, only, cut clean away. This applies to the *Prairie, Ayrshire*, and other strong hardy runners, as well as to the *Banksia* and other tender sorts.

The *Austrian Briars* include the *Harrisonii and Persian Yellow*, both pure yellow. Plant in a good, cool, moist soil, with much manure; mulch freely. In pruning, merely shorten the strong shoots, leaving most of the twigs, as they generally produce abundance of flowers.

[Written for the Valley Farmer.]

Calendar of Operations in the Vineyard.

BY GEORGE HUSMANN.

MAY.

This is a busy month for the vine dresser, as it is the month before all others in which the vines need the closest attention in summer pruning, tying, etc. The vines will grow rapidly, and as this is the month in which the mildew generally makes its appearance, and this evil can, to a certain degree, be counteracted by judicious summer pruning, this should have the closest attention.

We will suppose the fruit-bearing laterals on your vines pinched back to the last bunch of grapes, and the bloom over. The suckers in the axils of the leaves will now begin to push, and should, as soon as they are long enough, be pinched back to one leaf. This will then develop rapidly, and be an effectual protection to the young branches. These will also serve as a means to lead the sap into the young bunches, and they will advance more rapidly.

Keep a sharp look out for the small worms, which make their web in the tops of the young shoots, and destroy them at the same time.

Keep the young shoots for next year's bearing neatly tied to the trellis as they advance, as they will grow rapidly now, and break easily. Tie them perpendicular, away from the bear-

ing cane, keeping in view the object of giving as much circulation of air to the young grapes as possible, so that they will dry rapidly again after heavy rains. Of course, if you have been wise enough to plant only such varieties which are not subject to mildew and rot, you need not be so particular in this, nor be afraid of every rainy day.

Keep the weeds down, whenever they appear, using the cultivator and small plow between the rows, and a common garden hoe under the trellis and around the vines. Cultivate very shallow, and only scrape off the weeds with the hoe, and do it only in fine dry weather.

In a short time, the suckers will sprout again, and should be pinched back to one leaf of the young growth again. This is the last summer pruning they need, and it will probably not be necessary before the beginning of June.

Look to your grape grafts, and remove all suckers from the stock, as they will take all the strength from the scion, and kill it in a short time.

See to the layers, keep them clean, and tie them up neatly to the trellis or small sticks. They will make much better plants than if left hanging on the ground. When about 18 inches long, pinch off their tops, it will make them more stocky, and they will be better supplied with fibrous roots.

For tying, use either Papaw bark, slit fine for that purpose, or rye straw, cut when green.

Planting and Training Grape Vines.

Ed. Valley Farmer:—In the March number of the *Farmer*, I find an article on this subject, which I believe contains many very valuable hints, nevertheless there are some which, according to my observation, I think are erroneous. I mean especially in regard to pruning, and the length of time it would take, according to the writer's statement, until a crop could be realized. He is evidently a thorough-going man, as we can perceive, from the way in which he prepares his ground, but I am afraid, that if every farmer had to prepare a border fifteen feet wide and three feet deep, and then take out the sub-soil, and put in decayed turf, well-rotted stable manure, bones, etc. and after taking all this trouble, wait five years until he could expect a full crop; many—more than one-half—would not, even if their mouth watered ever so much after grapes, feel disposed to take this trouble. Nor is it necessary.

Nearly all the soil in our State is rich enough if properly worked and prepared, to produce growth and fruit enough on the vines without such extra preparation. I have a vineyard now in cultivation, which was planted fourteen years ago, on a poor hillside. There were only holes dug in the soil, eighteen inches deep and two feet wide, and the vines planted in them. These vines produced, the third year after planting, 750 gallons of wine, about 500 gallons to the acre, and have had good crops, in good seasons, ever since. I do not wish to be understood, as if I considered this the proper way; by no means; I think it would have paid well if the soil had all been thoroughly stirred; I only wish to show what grapes do, even if not planted with extra care, so that everybody can plant, with reasonable hopes of having grapes the third year.

I think, a vine, petted and fostered with such extra care, as the writer of that article gave to those he planted, and which grew ten feet the first summer (as by rights it ought to) must be a very ungrateful thing, if it did not bear a full crop the third summer. In fact, if cut back, and always cut back for three years in succession, as the writer served his, there would be *no end* to its growth, and I think it would run as the old phrase is, half over creation, if not kept in check by some bearing.

My plan would be, if a vine grew ten feet the first summer, to cut back to three eyes, if on a trellis, for arbor training. These would produce three strong canes, and I would be imprudent enough to prune two of them to about eight buds each, which I should want to produce about thirty good bunches of grapes, and I think, my vine would be obliging enough to do so, and to produce wood enough besides to bear fifty bunches next season, and still to grow, and "get fat" on all that. If it did not I should think it "a poor stick" indeed.

Again, the writer thinks, that it is absolutely necessary to leave four or five leaves above the last bunch of grapes on the fruit-bearing laterals, and holds the opinion that the number the German vine dressers of the West leave, namely, one or two, is entirely inadequate to the wants of the plant. He *cuts* his laterals when the grapes are the size of small peas.—Now I will try to show, that our German vine dressers really leave more leaves on them than he does. We pinch, it is true, as soon as the leaves have expanded enough, long before the bloom, back to just above the last bunch of grapes, or rather, what will be grapes. This leaves say five leaves on each lateral. Out of the axils of these leaves, suckers will come up,

which we pinch back again, as soon as we can get hold of them, to one leaf. This gives us ten on each lateral. These young leaves stand besides, directly opposite the bunches of grapes, drawing the sap to them; and, as they develop rapidly, shading the fruit effectually. But this is not enough. These suckers will start again, and the young shoots are pinched back again to one leaf each, which gives us fifteen to each lateral, and if these start again, they are left to grow, to suit themselves. Here we have instead of the writer's nine or ten leaves, fifteen or more, and leaves, too, what are leaves. We need no knife to "cut back" a full grown shoot, our finger and thumbs can do all the work; we do not rob the plant at once of a large amount of lungs, *i. e.* leaves, but gently stop the sap, and lead it into other channels, the young fruit and leaves, which are left; we force the fruit along, and at the same time have the foliage properly thinned at the most critical time for the young fruit, namely, when mildew appears. This, we think, better than the cutting and slashing system, and whether we can grow grapes, and perfect ones, too, we think we have shown at the different fairs held in this State.

Now, as we both have said our say, I leave it to your readers to judge what method they would prefer. GEORGE HUSMANN.

CURCULIO REMEDY.

The following article is copied from an Eastern paper. The remedy has been tried by a number of persons with entire success. Mr. Russell Hinckley, Belleville, Ills., a very reliable gentleman, has tried it and says it is entirely effectual. If any remedy can be found which will prevent the little "Turk" from destroying our entire crop of plums, it will be worth thousands of dollars. We hope some of our readers will fairly and faithfully try the proposed remedy and report the results.

CLARKSVILLE, TENN., Feb. 18, '61.

Messrs. Editors: I noticed in your issue of the 7th inst, an article from William A. Cummings, of Darien, Conn., speaking in favor of your curculio remedy as a wash for plum trees.

My trees bore abundantly last season, but from some (to me) unknown cause the fruit all fell off before maturity. I will thank you to send me your "Curculio remedy," accompanied with any instructions you may see proper to give. Very respectfully,

BENJ. F. MCKRACK.

We have numerous requests on hand to republish the receipt of this mixture. We give it below thus early for the benefit of fruit-growers at the South. Will those at the North put aside this paper for reference when the curculio begins his invasions upon the young fruit? The application of the mixture should be made when the fruit has attained the size of a small bean, or as soon as the crescent marks of the insect appear on the fruit, which is not till one or two weeks after the blossoms have fallen.

We have increasing confidence in the efficacy of this remedy for preserving the plum and all other stone fruit from the ravages of the curculio. The apricot and nectarine are equally subject to his incursions as the plum.

Many fair experiments have been made with it. The one by our correspondent at Darien was on the right basis. A part of the trees were syringed, and a part omitted. The fruit was an entire success where the remedy was applied, and a total failure where the application was not made.

We insert the following:

"About a year since, you published in the *Observer* a receipt for preserving plums from the ravages of the curculio. I applied that preparation to just one-half my plum trees. The result was most satisfactory. The trees that received the application ripened an abundant crop of as perfect and beautiful plums as ever grew, while not a single plum ripened on those trees to which the wash was not applied. I made but one application, but this was done thoroughly, with a garden syringe, and as soon as the effects of those destructive insects were discovered."

Such has been the case in various instances which we have already published. Such was the case in Andover, Mass.—such also in West Jersey. We could give scores of instances of success which are verbally reported. There is a hardened race of this insect about Germantown, Pa., that is said to defy this mixture. Next to the Delaware Grape it is the worst foe with which our friend of the *Telegraph* has to contend. He has our sympathies.

This mixture will destroy all other insect depredators of fruits and flowers.

It is a perfect exterminator of every species of worm and caterpillar that we have yet seen.

The good citizens of Brooklyn were some of them the past year highly incensed, by the worms on the shade trees of their streets, and evoked various means for their protection. We will guarantee a total destruction of their foe where this mixture is faithfully applied. The remedy is not expensive, and with a small engine and hose could be readily applied to ornamental trees of any dimensions. If generally and thoroughly applied, it would prevent the perpetuation of the nuisance. During the discussion of our good neighbors over the river the past season, remedies of doubtful utility were seriously proposed of many-fold the cost of this, and more difficult of application. If any one doubts the efficiency of this remedy against any species of the worm or caterpillar, let him try it on a small scale, and put the cost of failure to our account.

THE MIXTURE.

To one pound of whale oil soap add four ounces of sulphur. Mix thoroughly, and dissolve in twelve gallons of water.

Take one half peck of quick lime, and when

well slacked, add four gallons of water, and stir well together. When settled and clear, pour off the transparent part and add it to the soap and sulphur mixture.

To this mixture, add four gallons of strong tobacco water. Apply this compound, when thus incorporated, with a garden syringe to your plum or other fruit trees, so as to drench all parts of the foliage. If no rains succeed for three weeks, one application will be sufficient. If washed by rains, it should be renewed.

In preparing this mixture some are troubled to obtain *whale oil soap*. Many do not know what it is. Every drug store in the country of much extent, should keep the article for sale. It can be obtained in quantities of all whale oil bleachers. This soap is the result or deposit, from mixing potash ley or soda-ash with whale oil. The alkali has an affinity for the discoloration and impurities of the oil, and the precipitate from this combination, constitutes whale oil soap.—[*N. Y. Observer*.

Young Orchards in Grass Land.

We cannot too strongly condemn the practice of planting young orchards in grass or meadow land, or of seeding the land to grass or grain crops, after young orchards have been planted.

Young orchard trees require a deep, mellow soil, which can be stirred, and thus kept well pulverized and moist during the drouth of summer. Trees cannot make a fine, thrifty growth without good attention, and a thorough and continued cultivation of the soil. Those who think differently will find out when too late that they have been mistaken.

After going to the expense of purchasing the trees, digging the holes, and planting them, it is too great a sacrifice to neglect them and thus lose them. Many think, if a tree is planted, that is enough. Do these same persons think it is enough to merely plant corn, potatoes, or cabbages, without after cultivation? We hope these remarks will induce those who have held this neglectful theory, heretofore, to take care of the trees they have planted this spring, and thus see them rapidly grow into productiveness and beauty. Those who have planted trees this spring and have not shortened in the branches should lose no time in doing so. Leave only three or four branches to form the base of the future tree. Shorten these to full one-half of their length. As the tree has lost a large portion of its roots, so should it lose the same proportion of its branches to restore the equilibrium between its roots and head.

A fruit tree should never be pruned with a larger instrument than a pocket knife. Needless branches should be pinched back or cut off as soon as they commence to grow. In this way there will be no surplus wood to lop off.

[Reported for the Valley Farmer.]

Meramec Horticultural Society.

School House, Allenton, April, 4th 1861.

The twenty-eighth monthly meeting of the Meramec Horticultural Society was held as above, the President Dr. L. D. Morse in the chair.

The Minutes of the last meeting were read and approved.

Motion to amend the Constitution was voted upon and lost. One new member was admitted. Report from Librarian, embracing rules, was received and adopted.

Dr. A. W. McPherson, chairman of the Fruit Committee, reported: Specimens of Yellow Newtown Pippin, Ortley, Winesap, and Rawles' Janet, exhibited by Hon. F. Becker. Newtown Pippin and Winesap, fine specimens, in good condition; Ortley, getting out of season, and Juneton wanting in flavor—not a fair sample. These are four varieties of well tested fine winter apples, that succeed in this locality—no one is likely to regret having planted any of them.

Mr. L. D. Votaw presented specimens of his seedling apple, which still exhibit evidence of good keeping qualities.

The Flower Committee reported a collection of Peach Blossoms of different varieties, by Dr. J. B. H. Beale; also a boquet of wild flowers by Mrs. Dr. Morse, of Johny Jump Up (Viola Culeullata), Spring Beauty (Claytonia), Dutchman's Breeches (Dicentra), Windflower (Anemone Nemorosa), Buttercup (Ranunculus Fascicularis), and Service Berry (Amelachier Canadensis). With this report the Committee take the liberty to remark that the prevailing indifference to the wild flowers of our country is, to a very large extent, kept up by the too prevalent habit of recognising nothing as fine or beautiful unless it is dear or far fetched, and that this condition of the public mind is unwittingly fostered by the majority of the journals that discourse of flowers; but, independently of their beauty and ease of access, we regard them as worthy of record as a true index to the general character of the season as well as of the locality where found.

The Hon. J. R. Barrett, through Dr. A. W. McPherson, presented to the Society a parcel of new garden seeds for distribution among the members, which was received with thanks.

On motion the following preamble and resolutions were unanimously adopted:

Whereas, This Society has received information of the failure by the House of Representatives of the late Legislature to pass the bill organizing a State Board of Agriculture for Missouri; therefore,

Resolved, that we record our thanks to, and high appreciation of, the invaluable service rendered to the measure by the Hon. Chas. Jones, the Hon J. T. V. Thompson, and other members of the Senate Committee on Agriculture; the Hon. Preston B. Read, the Hon. R. G. Coleman, and the Senate as a whole. To Dr. L. Wyatt, Gen. T. L. Price, and other efficient friends in the House of Representatives.

Resolved, That we cannot but express feelings of the profoundest regret that a measure of such vital importance to our State should meet with such marked coldness and open opposition, as to postpone the action of the State in its Legislative capacity for two more years, when the interests of every branch of industry, commerce, and finance so imperatively demand a relief only attainable in a permanent manner by the development of the resources of our soil.

Resolved, That, as this is a measure of nearly equal interest to all parts of the State, we respectfully suggest to the various societies connected with agricultural improvement in our State, the propriety of their earnest and active co-operation for the purpose of securing its accomplishment.

The Kitchen Garden, The subject of discussion for the day was then taken up. All agreed that the kitchen garden was generally too much neglected, and its importance in point of health and economy not

usually properly appreciated. There was no work on the farm that paid better than that properly expended upon the garden. There was a difference of opinion as to whether the plow should be admitted for its cultivation, or whether it should be entirely spaded. The majority were in favor of spading. There was a question, also, as to whether the small fruits and dwarf fruit trees should be admitted. Unless a regular fruit garden could be maintained, it was thought that the small fruits, especially, should have a place in the kitchen garden, and dwarf fruit trees were admissible. The garden should be so managed as to supply the table all the year round with the variety of vegetables so essential to health and comfort.

On suggestion, the President appointed a committee to report at the next meeting on Celery Culture.

The next meeting being the third May meeting was announced to be held as the preceding May meetings have been, at the house of Dr. A. W. McPherson, at Allenton, on the first Thursday of May at 10 A. M.

On Motion, the meeting adjourned.

WILLIAM MUIR, Sec.

[Written for the Valley Farmer.]

Missouri State Fruit Growers' Association.

[Continued from April No.]

THE GOOSEBERRY,

Was next in order for discussion, Mr. Pettingill was called to open the subject. He stated that he adopted much the same course with the gooseberry as with the currant. Of the varieties, he had found the Houghton Seedling and Pale Cluster best. Adopts much the same plan with their propagation and pruning and general treatment. Some I think have made a growth of one hundred feet, were it all put together, and cover a space of about three feet each way. The Pale Cluster is more erect in its growth than the Houghton. I have gathered from three pecks to a bushel per plant. Find them more healthy than most English varieties, which are extremely liable to the mildew. Prune those planted last spring this winter a little; they bear a little the second year; the third year bear a good crop, and prune out the old wood to get young healthy wood. Plant out cuttings in the fall or early spring.

Dr. Beale planted out Houghton's Seedling; they made a fine growth the first year; and pruned too severely the second season, taking away too much of the wood; they bore but little fruit; they have spread very much, and now cover the whole ground.

Mr. Pettingill thought 6x5 is the smallest distance they will do with. The Cluster does not spread so much as the Houghton, and finds no difference in productiveness—if any it is in favor of the Cluster. The currant is the most profitable of the two, and is better for wine. Gooseberries bring about $4 per bushel.

President thinks the gooseberry is much better adapted to this climate than the currant. It will grow and produce more fruit than the currant; but you will not get so large returns. We grow the gooseberry by the acre. We don't mulch, although I think mulching will pay well. The variety we cultivate is the Houghton Seedling. We sell all we can produce at from twenty to twenty-five cents a quart.—The Houghton we find perfectly hardy and productive. They raise the gooseberry in Cincinnati in great quantities and sell them in this market. It will pay well to give rich manure, but will do with less than the currant.

Mr. Husmann asked if any one had tried the Downing gooseberry.

Mr. Mason has heard the Mountain Seedling spoken very highly of in the East, it is still scarce and cannot be obtained in large quantities.

THE RASPBERRY

Was then in order. Mr. Carew Sanders said that he knew of no variety of the raspberry that combined all the good qualities that distinguishes that fine fruit and is also hardy, healthy and productive, and of good size. The Kirtland is one of the best varities; is hardy, fair size, and productive. Whether it is equal to the Antwerps in the other qualities I am not quite satisfied. There are a number of others that are good. Brinckle's Orange is one of the best we have got; it is a wrong color for market, and is too tender. Doolittle's improved American Black Cap, originated in the woods, and seems an improvement on the old varieties.

Mr. Husmann said, Mr. S. speaking of the Black Cap brought to his mind a plant of that kind he found in a fence corner, an accidental seedling, that surprised me. Fine large berry, juicy, few seeds, good flavor, and productive; have cultivated it somewhat, and think it may prove valuable. Among the common raspberries of the woods we find vast differences as to quality, and some of great excellence.

The President remarked that the raspberry deserves much more attention than has been hitherto given to it. It is the most delicious of any fruit, easy of cultivation, and is most desirable for family use; and we have some varieties which every family should cultivate. The Purple Cane, called by some the American Purple, is one of the best for common cultivation. They are hardy, were taken from the woods, propagate easily, the tips of the canes taking root; fine flavor but soft for market. The Kirtland is hardy, but has not been tried long; it seems to be very productive, and promises well as a really profitable variety. If the same system of mulching were adopted with the raspberry that has been recommended with the currant, there is no doubt it would do much to aid their cultivation, and afford vast returns. The Allen has not, as yet, yielded well, but we have not given it so much attention as to decide fully upon its merits. We have been cultivating largely a variety that is hardy, a very rapid grower, is extremely productive, and bears fruit during THREE months of the year, many of the branches having blossoms, green berries, and ripe fruit on them at the same time. As yet there is no variety that combines so many excellencies as the Catawissa. The Belle de Fontenay is another ever-bearing variety, and is a fine fruit. When we reflect upon the situations in which we invariably find these fruits in our woods, in the fine rich soil, covered with the fallen leaves, and protected by the timber; and that our improved varieties are obtained from these, or foreign varieties, that are not accustomed to our rigorous winters and hot dry summers, we will see that mulching is our great hope with them as well as the currant and gooseberry.

THE BLACKBERRY

Was then in order, and was introduced by Mr. Pettingill, who said he had not cultivated the Lawton very extensively, but so far as I have done, I have been well repaid. Three years since I procured 200 bushes from Mr. Lawton; and the two last years they have produced abundantly; and have increased in size, quality, and productiveness far beyond my expectations. The canes grow from six to eight feet long.—During the first year I cultivated highly, and, as with the currant, cover the ground with a heavy mulch.—Some of my neighbors procured plants at the same time, and they all pronounced them humbugs; but since they have seen the large and uniform crops I have had, they are now convinced there is no humbug in it. With the same treatment as the currant, they produce very large berries and very abundant crops. Some object to the berry as being too acid; but this arises from the largeness and beauty of the berry, even before maturity, and they are apt to gather it too soon, at which period it is acid, but when fully ripe it is sweet, rich and juicy, and is in full perfection when just ready to drop from the bush. There is a complaint of winter killing, but I have not found them winter killed where they were well mulched. I have made fifteen to twenty gallons of excellent wine, and

find that five quarts of berries make one gallon of juice. With four feet between the plants, and six feet between the rows, they covered the ground, and I could sit under the plant in the shade and gather the fruit. By having the ground always under mulch, the plants don't need cultivation to keep down the weeds, and can be closer in the ground.

THE GRAPE—Location.

Mr. Malinckrodt thinks that as to location, it makes but little difference whether it is an Eastern, Western or Southern location, if the ground is under-drained and thoroughly trenched.

Mr. Jacob Rommel said, I have found that draining and trenching are necessary; that a South-Eastern and Southern exposure are much better than a Western; a South-Western exposure is good, and I find that our severest rains come from the Western and South-Western points, and consequently there is more danger to be apprehended from washing in those locations than any other—and from this cause it is that we find our Western hillsides so very bare of soil. As to ripening I have not found much difference between the South-Eastern, Southern, and South-Western aspects, and I have found the Norton ripen as well upon the Northern as any other aspect; but in such a position the Catawba will not do—they are neither so finely flavored nor have such good crops as on other exposures. My vineyard lies from East to North, but no part does so well as a whole as the South. The question has been asked as to level ground. It does well in high places, but not in a valley; and the crop when produced in a valley does better for market than for wine. The vinous or essential qualities of the grape are never so well developed. In planting, run the trellis as nearly as possible from East to West never from North to South. It is always desirable to secure shade in ripening the fruit. I sometimes tie the leaves over the bunch to secure shade. I use open drain as well as tile, and make surface cesspools to collect all the washings and return them to the vineyard.

Mr. George Husmann said that his views upon grape growing were already so well known that he hardly had any more to say; he had, however, found some very important differences in the varieties in regard to their location. That while with the Norton you could carry it all round to the north hillside (if near the summit) the Catawba did best upon the south-eastern and southern sides; and he agreed most fully with Mr. Rommel that good table grapes can be produced where good wine making grapes could not be obtained.

Mr. Malinckrodt—Would not thorough draining and deep plowing remedy this to a large extent?—Making the soil pervious to the water, and removing the superfluous moisture from the roots, would tend very largely to improve the health of the vine and the quality of the fruit.

The President remarked that these ideas held good to some extent; that thorough draining and sub-soil plowing would do much in removing the tendency to wash. This was taken up by the Meramec Horticultural Society, and shown to be of vast importance by increasing the capacities of the soil to absorb the moisture.

Mr. Malinckrodt remarked that in arranging any system for preventing washing by a merely superficial appliance, as by open draining, terracing, or any such modes, it should be borne in mind that to break or change the direction of the current, was of great importance; and even where under-drained, if the inclination of the land was considerable, this mode of breaking its course would be found of considerable importance.

Mr. Husmann agreed with this view, it was adopted in the hillside vineyards at Hermann with great benefit.

Mr. Kelly wished to know to what extent a vineyard could be extended into a ravine. There is much of that class of ground among us, and it would be important to know if it could be profitably used as vineyards.

Mr. Husmann said ravines were of two classes—those having springs and small streams and dry ravines. In the ravines, as a rule, the heavy air lay still in them, and frosts were common and fatal. In those which were found secure from frost they might do quite well. Excessive moisture was injurious, and some of the ravines were very moist.

The President said it was found that in ravines and other considerable depressions there is a well marked frost line, under which the peach was very frequently killed and over it it was almost always secure, and this would hold as a guide to a large extent in considering the general adaptation of ravines.

The Apiary.

LOOK NOW TO YOUR BEES.

There is not a more important month to the bee keeper than this; but as it is a busy month in every department of farm labor almost, the apiary is apt to be forgotten. In all localities some stocks will be found weak at this season, especially if they have been bred "in-and-in" long, thus lessening constitutional vigor. Such stocks must be fed, and if in movable frames, they should be supplied with combs containing brood from strong stocks.

Very great assistance may be rendered all the colonies in the apiary by turning up the hives and paring away all filthy, or moldy, or crooked comb, and all loose stuff about the inner edge of the hive, and cleaning away all dead bees and pieces of comb about the platform. Such refuse always affords a capital place for the bee-moth to lay its eggs, and makes a fine hiding place for all insects which infest bee-hives.

I cannot do better here than to copy from "Langstroth on the Honey Bee," the author's remarks on this month's duties:

"As the weather becomes more genial, the increase of bees in the colonies is exceedingly rapid, and drones if they have not previously made their appearance, begin to issue from the hives. In some locations bees will now gather much honey, and it will often be advisable to give them access to the spare honey receptacles; but in some seasons and locations, either from long and cold storms, or a deficiency of forage, stocks that are not well supplied with honey, will exhaust their stores and perish unless they are fed. In favorable seasons swarms may be expected in this month, even in the Northern States. These May swarms often issue near the close of the blossoming of fruit-trees and just before the later supplies of forage, and will sometimes starve if the weather becomes suddenly unfavorable unless they are fed. Even if there is no danger of this they ought to be fed when food is scarce or they will make so little progress in comb-building and breeding as to be surpassed by much later swarms. The apiarian should have hives in readiness to receive new swarms however early they may issue or be formed."

Colonies that are not carrying in pollen, or bee-bread on their thighs, may be set down as queenless, and should be at once examined, and if there is no sealed brood in the combs should be broken up and united to other swarms. Look out for robbers. If a hive is attacked, close the entrance so that only one bee can enter, and if the robbers collect upon the hive, drench them with cold water. Bees are poor hydropathists, and dislike such irregular practice.

Remember that if cold, stormy weather intervenes, no honey is gathered, but consumption goes on rapidly as the hives are full of young brood.

Burr Oak, Mich. C. B.

[Written for the Valley Farmer.]

COFFEE.

Good coffee is rare; a good cup still rarer. It is remarkable how little good coffee is found in so wide a consumption. This is less owing to the quality, than the making. There is some negligence, but more ignorance. The most delicate dish of the table is spoiled from a lack of knowledge how to prepare it.

The best way of obtaining this knowledge, is to apply to some one who has the reputation of making good coffee—be sure the reputation is well founded: or you may avail yourself of written directions, care being taken in the selection of your authorities. These are generally agreed, which is also a sign of their genuineness.

First—There must be a good selection of coffee. The best bean is obtained from Mocha, called by that name. Its berry is small, and of a whitish color. It commands the highest price in market, outselling Java—the next best—by several cents on the pound. The Java is mostly used in this country; and is preferred by some to the Turkey, as the Mocha is sometimes called. But it lacks the delicate flavor of the small Arab bean.

An important point in selecting coffee, is to secure it while fresh. It loses its strength with time if exposed to the atmosphere. Avoid all coffee that has a strong odor, or a rusty or moldy appearance. Select that that is bright and free from dirt.

Next comes roasting. This is a delicate operation; and too much care cannot be exercised by the uninitiated. Take a skillet; heat it till the grease has all evaporated, which will be in a few minutes with a hot fire. Then somewhat cool your vessel by removing it from the stove, for only a few minutes, for it must be pretty well heated when the berry is put in. An ordinary-sized skillet will brown half a pound at a time.

After your coffee is freed from all dirt and defective berries, pour half a pound or less into your vessel; put the vessel into the oven of your stove, which must be somewhat hotter than is necessary to bake bread—sufficiently hot to brown your coffee in ten or twelve minutes stirring it thoroughly every minute or oftener. When it acquires a dark chestnut color, and a *gloss*, remove it at once, and secure it in a bottle, which must be kept well corked. Thus it may be kept for almost any length of time without losing its strength or flavor. If exposed to the air, these rapidly escape. Hence the tasteless quality of the browned coffee of commerce, which you always find without the gloss—an important point, important, because this glossy coat is the oil which gives to coffee its flavor. Heat brings it to the surface, and greater heat more effectually. Part of this escapes into the atmosphere if exposed to it, some of it goes back into the berry. Another heating will restore it.

The lower grades of coffee require more roasting. This will destroy the raw or bean taste, and substitute a somewhat pungent aroma. More heat will also more fully develop the oil. Such coffee should be browned to crispness, just avoiding the coal. The last minute requires very careful attention, and almost constant stirring.

Lastly, to make coffee. Uncork your bottle, take out what coffee is wanted, and be sure to secure your bottle well again. Grind your coffee to a powder—as fine as you can grind it. It will yield a strong, rich odor; it is therefore rapidly losing its best quality; so immediately proceed and mix with it the white of an egg (I prefer it to all the many other things I have tried). This mixing requires care. If there is too much egg, the egg will cook, and the coffee in it kept from contact with the water. Hence its strength will be partially lost. If not sufficient egg is added, it will not sufficiently "settle" the coffee. It should be mixed with sufficient egg to form a hard, stiff paste, verging on the crumbling. Avoid paste. Boil one minute and a half to two minutes. Then serve with hot milk—or cream, which is much better. Sugar without flavor should be used. It will take two minutes for the milk to unite with the coffee, in which time it will sensibly change its color to a darker shade. Treated in this way, a cup of coffee is the rarest dish of the table. And it is not hurtful when moderately used by the healthy. It is the excess, which we are so apt to run into, which is hurtful to the nerves. Like all beverages, it is very apt to be abused. Coffee is the great artificial aid to the thinking man, especially to him who is of an imaginary

turn of mind. Not its regular use, which has little effect that way; but increased quantities, which also dispose to wakefulness. F. G.

[Written for the Valley Farmer.]

GOOD READING.

This is an age of letters. Reading is the common employment of some; the amusement of millions. Scarcely a home is now to be found in which there is not some reading, some book or paper; and yet the reading era has but just dawned. Reading is every year increasing. It is said upon good authority that the papers and journals published in America every year, if opened and laid one upon another, would make a pile more than thirty miles high. If to this pile we add the books it might make a pile fifty and for ought we know a hundred miles high. What a multitude of readers they must have! And what an immense business has writing, printing and reading become!

Now, books and papers, like almost everything on earth, are good and bad. The good books and papers probably preponderate, but there are many bad, and many indifferent. It should be the care of all parents and guardians, and heads of families, to secure good reading for the family. By good reading we mean such as shall improve the mind, increase the stock of reliable knowledge, give us such facts and conclusions as shall make us more intelligent and wise; such as shall improve the taste, quicken the desire for useful knowledge, cultivate the understanding, and strengthen the judgment; such as shall animate the affections, regulate the passions, improve the moral sense, elevate the character and adorn the life with virtues. We should read of the knowledge we ought to attain, the virtues we ought to possess, the lives we ought to live. We should read to keep our thoughts in the channels they ought to run, to tone our feelings to the true key of life's great anthem, to adorn our characters with the graces of wisdom and moral excellence.

Useful knowledge can have no enemies except the ignorant; it cherishes youth, delights the aged, is an ornament in prosperity, and yields comfort in adversity.

Ill Manners.—Pride, ill-nature, and want of sense are the three great sources of ill manners; without some one of these defects, no man will behave himself ill for want of experience.

Many a man thinks it is virtue that keeps him from turning a rascal, when in reality it is only a full stomach. One should be careful, and not mistake pudding for principle.

AMERICAN ANTIQUITIES.

From unanswerable facts and statistics it is evident that the great valleys of the Ohio and Mississippi were once the abode of a mighty nation—civilized and refined, warlike and brave—descendants of mighty nations, and who settled in the country long before the appearance of the Saviour upon the earth. Near Lexington, Kentucky, are the remains of an ancient catacomb, formed in the solid rock of limestone. This curiosity was discovered in the year 1776, by the early settlers of that country. The mouth of the cavern was carefully concealed with stones, which, on being removed, opened into a cave of immense magnitude. The sides of this spacious apartment were found, upon examination, to be cut into niches or compartments, occupied by figures representing men. By further investigation these figures were discovered to be mummies—persons preserved by the art of embalming—and exhibited a state of perfection equal to that known at any time among the Egyptians; and you will bear in mind that this art was practiced by that people three thousand four hundred and seventy-five years previous to this discovery in Kentucky. The catacomb was capable of holding two thousand subjects.

Again there is found on the Ohio, near twenty miles below Wabash river, another remarkable work of antiquity. It is a very large cave, with smooth perpendicular walls and a level floor. The walls are covered with hieroglyphic figures, cut in solid stone, and are well executed. Among them are representations unknown to the present generation. This cave is one of the greatest curiosities on the Ohio, and is connected with a dark, dismal cavern, nearly the same size, which is located directly above it, and which is accessible through a chimney-like aperture.

When we view the ancient mounds and tumuli of the West we are lost in wonder, in view of the number, magnitude and obscurity of their origin. There are several hundreds of these works in the valley of the Ohio and Mississippi rivers, and some of them are found to be filled with thousands of human skeletons, indicating that they were places of deposit of the dead.—They also bear the appearance of having been contiguous to some large and populous city.—Many strange and curious antiquities have been, from time to time, exhumed from those mounds, and it is most significant, that in a great majority of instances there exists a remarkable resemblance between these relics found in the nineteenth century, and articles which were known to have been used among the Romans, Grecians and Egyptians before the days of Christ!

A teacher had been explaining to his class the points of the compass. All were drawn up in front toward the North. "Now, what is before you, John?" "The North, sir." "What is behind you, Tom?" "My coat-tail, sir," said he, trying at the same time to get a glimpse of it.

Every man complains of his memory, but no man complains of his judgement.

A Great Man's Advice to a Young Lady.

It was in the year 1758, long before the war of Independence, that Colonel Washington (as he who was to be the founder of the American Republic was then called), crossing on business a ferry of Pamunka, a branch of the York River, was stopped by request to partake of the hospitality of a Mr. Chamberlayne, the owner of a domain in Virginia, where the name of the Colonel was honored. The strict Washington insisted on pressing forward, but the Virginia Amphitryon would take no denial, urging, among other temptations, that he would introduce his friend to a charming widow, then beneath his roof. This was a Mrs. Custis (*nee* Dandridge) aged twenty-six, who had married a gentleman who was both a colonel and an eminently successful painter. By his premature death, Mrs. Custis "found herself at once a very young widow, and among the wealthiest in the colony."

Col. Washington came to dine, and remained to woo. He was fascinated by the widow, and, marrying her, lived never to repent the step.—The new Mrs. Washington had a step-son, —whose son, Mr. George Washington Parke Custis, is the author of certain "Memoirs" of the great man, just issued—and he and his sister were adopted by Washington. This young lady, Nelly Custis, when sixteen, and after her first ball, had told her reverend guardian that she cared nothing for "youth of the present day." The sound and sensible advice then given by Washington, at that time President of the United States, to his adopted daughter, is of universal application to those who, as she then was, are unengaged:

"Love is said to be an involuntary passion, and it is therefore contended that it can not be resisted. This is true in part only, for, like all things else, when nourished and supplied plentifully with aliment, it is rapid in its progress; but let these be withdrawn, and it may be stifled in its birth, or much stinted in its growth. For example, a woman (the same may be said of the other sex) all beautiful and accomplished, will, while her hand and heart are undisposed of, turn the heads, and set the circle in which she moves on fire. Let her marry, and what is the consequence? The madness ceases, and all is quiet again. Why? Not because there is any diminution in the charms of the lady, but because there is an end of hope. Hence it follows that love may, and therefore ought to be, under the guidance of reason; for although we can not avoid first impressions, we may assuredly place them under guard; and my motives for treating on the subject are to show you while you remain Eleanor Parke Custis, spinster, and retain the resolution to love with moderation—the propriety of adhering to the latter resolution, at least until you have secured your game, and the way by which it may be accomplished.

"When the fire is beginning to kindle, and your heart growing warm, propound these questions to it: 'Who is the invader? Have I a competent knowledge of him? Is he a man of good character?—a man of sense?' For, be assured, a sensible woman can never be happy with a fool. 'What has been his walk of life? Is he a gambler, a spendthrift, or a drunkard? Is his fortune sufficient to maintain me in the manner I have been accustomed to live, and my sisters do live; and is he one to whom my friends can have no reasonable objection?' If these interrogations can be satisfactorily answered, there will be but one more to be asked. That, however, is an important one, 'Have I sufficient ground to conclude that his affections are engaged by me?' Without this, the heart of sensibility will struggle against a passion that is not reciprocated—delicacy, custom, or call it by any epithet you will, having precluded all advances on your part. The declaration, without the most indirect invitation by yours, must proceed from the gentlemen to render it permanent and valuable; and nothing short of good sense and an easy, unaffected conduct can draw the line between prudery and coquetry. It would be no great departure from the truth to say that it rarely happens otherwise than that a thorough-bred coquette dies in celibacy, as a punishment for her attempts to mislead others by encouraging looks, words, or actions, given for no other purpose than to draw men on to make overtures that may be rejected."

[Written for the Valley Farmer.]

PROFANE SWEARING.

Profane swearing is a habit. It is not often among decent people intended as an expression of profane feelings, of course and vulgar tastes, of irreverent thoughts and cruel animosities; yet it often expresses these. In the mouths of base and cruel men, it is the true index to their thoughts and states of mind. They are as low as such language would indicate. Being the dregs of society, they use the dregs of language. Being foul and offensive in character, they use foul and offensive language. It is speech appropriate to them. It is the corrupt stream from a corrupt fountain.

But among fair, honorable people, profane language is a libel against their real worth, a fungus on their speech. It misrepresents their true characters; and whoever uses it among strangers is taken for what the language indicates. For a good man to use such language is to slander himself. If others should say as bad things of him as his language does, he would think himself the most abused man in the world.

Boys fall into this habit without dreaming that out of their own mouths it will slander them as long as they live. And youth indulge in thoughtless profanity, regardless of the fact that it is a witness from their own tongues against their worth. Profanity everywhere dishonors an honorable man. It makes him a witness against himself at the bar of good society. Language ought to be the true index of the heart; and whenever it indicates foulness, men are apt to take it at what it says. If men do not mean to be understood as being irreverent, profane, and cruel in heart, they ought not to use language indicative of such an inward condition. "Out of the heart the mouth speaketh."

Domestic Department.

THE BEST WHITEWASH.—The arrival of the house-cleaning and house-repairing season, and several recent inquiries, remind us to again refer to that first rate in-door white-wash we described last June.—Nearly a year's trial has confirmed all we said of it.—Our house ceilings, and the walls where not papered, which received one coat last May, are now as white as after a usual fresh coat of lime, and we have not been in the least trouble with its "rubbing off." The numerous published recipes to the contrary notwithstanding, we believe no preparation of lime or other material will adhere well without the addition of glue, oil, or varnish. The latter two articles are expensive, and caustic lime mixed with glue will soon change its color. White chalk is uncaustic lime (carbonate of lime), and this substance is the best substitute for lime as a white-wash. A very fine and brilliant white-wash preparation of chalk is called "Paris White." This we buy at the paint stores for three cents a pound retail. For each sixteen pounds of Paris White, we procure half a pound of white transparent glue, costing twenty-five cents (fifty cents per pound). The sixteen pounds of Paris White is about as much as a person will use in a day. It is prepared as follows:

The glue is covered with cold water at night, and in the morning is carefully heated, without scorching, until dissolved. The Paris White is stirred with hot water enough to give it the proper milky consistence for applying to the walls, and the dissolved glue is then added and thoroughly mixed, It is then applied with a brush like the common lime white-wash. Except on very dark and smoky walls and ceilings, a single coat is sufficient. It is nearly equal in brilliancy to "zinc white," a far more expensive article. It is of course a little more expensive than common lime, but is cheaper in the end, on account of its better color, greater permanence, and firm adherence to the plastering. At least such is our experience.—[Agriculturist.

CHARCOAL FOR BURNS.—The "Gazette Medicale" of France, says, that by an accident charcoal has been discovered to be a sure cure for burns. By laying a piece of cold charcoal upon a burn the pain subsides immediately. By leaving the charcoal on one hour, the wound is healed, as has been demonstrated on several occasions. The remedy is cheap and simple and deserves a trial.

UNBOLTED WHEAT BREAD.—Wet with hot water, pure, unbolted wheat meal; stir it with a stick or spoon as it cools; knead a little with the hands; make it into biscuit or rolls; rub them over well with dry flour, prick with a fork, and bake in a hot oven. This bread should begin to bake with a brisk heat.

TO ENCOURAGE THE GROWTH OF HAIR AND PREVENT ITS TURNING GREY.—A lady friend of mine was recommended by a coiffeur to use sage water. She was obliged to discontinue its daily use as it made her hair too thick. Pour boiling water on the sage leaves, and let them remain sometime in the oven or near a stove—then strain and apply to the roots of the hair daily. If any pomade is needed, an equal mixture of cocoanut and olive oils, with a little perfume, is very efficacious.

COMPOSITION FOR PRESERVING EGGS.—Take a half bushel of quick lime and put in a tub, and slack it with hot water till it becomes of the thickness of cream; then add three and a half pounds salt, one pound cream of tartar. Stir them together; then store your eggs in kegs or barrels, and pour in the preparation when cold till the eggs are entirely covered. This quantity is enough to keep one barrel of eggs. If the cask is kept tight, the eggs, it is asserted, will keep eighteen months or two years.

WATER MUFFINS.—Sift one quart of flour, add one teaspoonful of salt, make a batter with tepid water, putting first into the flour two teaspoonsfull cream tartar—when just ready to bake, add one teaspoonful of carbonate of soda, dissolved. Bake on a griddle in rings.

SWEET POTATO ROLLS.—Boil three large sweet potatoes; while hot, make smooth and beat in ¼ pound lard and one teaspoonfull of salt. Make a sponge of two and a half pounds of flour, and stir in the potatoes; one teacup of yeast; let it stand eight hours; make into little rolls; avoid all kneading and handling; let them rise again and bake in a quick oven.

AN EXCELLENT FURNITURE POLISH.—Into one pint of linseed oil put half a pound of molasses and a glass of gin; then, stirring well, apply sparingly with a linen rag, and if rubbed till quite dry with linen cloths, this mixture will produce a splendid gloss.—Eating tables should be covered with oil-cloth or baize, to prevent staining, and be instantly rubbed when the dishes are removed.

BROILED STEAK.—Should be cut from a well-kept rump, and they are generally liked about three-quarters of an inch thick. Most cooks beat them with a rolling pin for ten minutes, but if the meat is of good quality, and the rump has been well kept, there will be no necessity for this. Just before finishing rub a lump of butter over, and lightly dredge with pepper and salt. Pickles and scraped horse-radish make a good garnish, and for sauce suit your taste.

HOP YEAST.—The following can't be beat: Into two quarts of water put eight good sized potatoes, and a handful of hops tied up in a bag, boil until the potatoes are well done; mash them through a sieve; add seven tablespoonsfull of flour; pour over this the water in which the potatoes and hops were boiled, scalding hot. Add half a cup of sugar; one tablespoonfull of ginger—stir well together, and when nearly cold put in a cupfull of yeast. After it is done working, add a teaspoonfull of salt, and bottle up for use. It will keep three months.

BROILED FOWLS OR PIGEONS.—The former are cut open—called spread eagles—down the back, and then pressed quite flat under a strong plate. After this the inside is wiped, and they are laid on the gridiron over rather a slow fire (for broiling), with their insides downward first, to keep in the gravy by hardening that surface. When brown, turn them upward, and continue till they are well done. Pigeons are generally done whole, but may also be split. They are served with pickled mushrooms and made sauce, or with pickled eggs and parsley and butter.

POUND CAKE.—One pound butter; one of flour; one of sugar, and eight eggs; season with cloves, nutmeg or cinnamon.

CHEAP FRUIT CAKE.—One cup sugar; one cup butter; ½ cup buttermilk; one teaspoon soda; three eggs, one cup raisins; one cup common currants. Chop the raisins and currants very fine.

NEW CEMENT.—Professor Edmund Davey lately read a paper to the Royal Dublin Society, on a cement which he obtains by melting together in an iron vessel, two parts, by weight, of common pitch, with one part of gutta-percha. It forms a homogenous fluid, which is more manageable for many useful purposes than gutta-percha alone, and which after being poured into cold water, may be easily wiped dry and kept for use. The cement adheres with the greatest tenacity to wood, stone, glass, porcelain, ivory, leather, parchment, paper, hair, feathers, silk, woolen, cotton, &c.

Editor's Table.

Only Fifty Cents.

This is the fifth number of the Thirteenth Volume. There are seven more numbers to be issued. We will send the remaining seven numbers of this year to any address for Fifty Cents. We hope our friends will induce their neighbors who are not subscribers, to invest fifty cents for an agricultural paper—that they may see whether they can afford to do without one hereafter. We intend to make each number more useful and entertaining. We are making arrangements for illustrations that will be not only useful but attractive.

The January Number.

We had several thousand extra copies of this number at the bindery for new subscribers. Upon sending for some of them a few days since, what was our astonishment to learn that one of the hands in the bindery had stolen them and sold them for old papers and left the city. No traces have been found of the missing numbers or the thief.

Those wishing to subscribe for the year can only be accommodated from February. We very much regret this. If the missing numbers "turn up," of course they will be forwarded to those desiring them.

Our Premiums.

On account of the delay of some of our Agents in sending the lists of subscribers to us, in order that we might compare them with our books before announcing the result, we are unable to publish it in this issue, but will notify by letter within a week or ten days (by which time we shall hear from all) those who are entitled to the Premiums which are now ready to be delivered.

☞ We have received from J. W. McIntyre's Theological, Sunday School, Bible and Tract Depository, No. 9 South Fifth street, St. Louis, the following interesting works for the young, viz:

Kenneth & Hugh; or, Self-Mastery.

Watson's Wood's; or, Margaret Huntington's Experiment.

Rest and Unrest; or the Story of a Year.

These works are written in a simple, entertaining style, on such subjects as will interest old or young, and inculcate excellent moral lessons. Those wishing to procure works of this character should call upon or address Mr. McIntyre.

An Inquiry.—Ed. Valley Farmer: Will you inform us where eggs of pure bred Dorking, Black Spanish and Poland Fowls can be had in Missouri. It seems strange that we are forced to send to New York for them. ALLIE.

[We regret that we cannot inform "Allie" where they can be obtained. Those having them would do well to let the public know it by advertising in the "Valley Farmer."]

Sabbath School Tunes and Hymns.—We are indebted to the publisher, Mr. J. W. McIntyre, No. 9 South Fifth street, for a small and very appropriate volume of Tunes and Hymns for Sabbath Schools.—They have been mostly prepared for the work, and a more suitable collection cannot be obtained.

Remarkable Prospects of the Wheat Crop.—Never has there been a season when the wheat crop was so promising over so wide a scope of country. If half the crop should be harvested that there now promises to be, prices must be low. But many calamities may yet befall the crop in various sections. The weevil, the midge, rust, &c. are yet to be contended with.

Sale of Morgan Horses.—O. H. P. Craig, Esq. of St. Joseph, has recently purchased of Charles Semple, Esq. of St. Louis, his two fine Morgan Stallio Colts, "Jesse Hinds" and "Ringoal," for the sum of two thousand dollars. Jesse Hinds was sired by Mr. Semple's splendid stallion Morgan Hunter, and Mr. Craig has changed his name to Morgan Hunter, Jr.—We are glad to see this fine stock going to St. Joseph, and hope our patrons there will call upon Mr. Craig, and see those fine young Morgan horses.

Kile, Cleveland & Co. No. 89 Fourth Street, St. Louis, Mo. are Agents for Appleton's New American Cyclopedia, for Missouri, Illinois, Kansas, Nebraska, &c. We have received the tenth volume of the Cyclopedia, and find it equal in merit to its predecessors. This is certainly the most meritorious work that has ever been issued from the American press, and no library is complete without it.

Barnum's St. Louis Hotel.—One of the most deserving "Institutions" of our city is Barnum's Hotel, situated at the corner of Walnut and Second streets. We have no hesitation in saying it is, without a doubt, the best hotel in the city. The building is new—the apartments for guests are commodious—the table is unsurpassed here or elsewhere—every one is treated with politeness and made to feel perfectly at home.

Messrs. Barnum & Fogg are both accomplished gentlemen, and constantly labor to promote the comfort of their guests. We say to our patrons, one and all, when you visit St. Louis be sure to stop at "Barnum's," and if you do so once, you will be certain to do it ever after.

Fruit Prospects.—Never, within our recollection, has the prospect for all kinds of fruit been so flattering. All kinds of fruit trees are covered with blossoms, not only upon high lands but upon low. The season is so late we have strong faith that there will not be frost enough to destroy the fruit. Indeed, if half of it in every tree could be destroyed, it would be an excellent thing; for the remaining half would be larger, finer, and better flavored. If people would take time to thin out their fruit, when the frost does not do it, they would be well paid for the trouble.

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